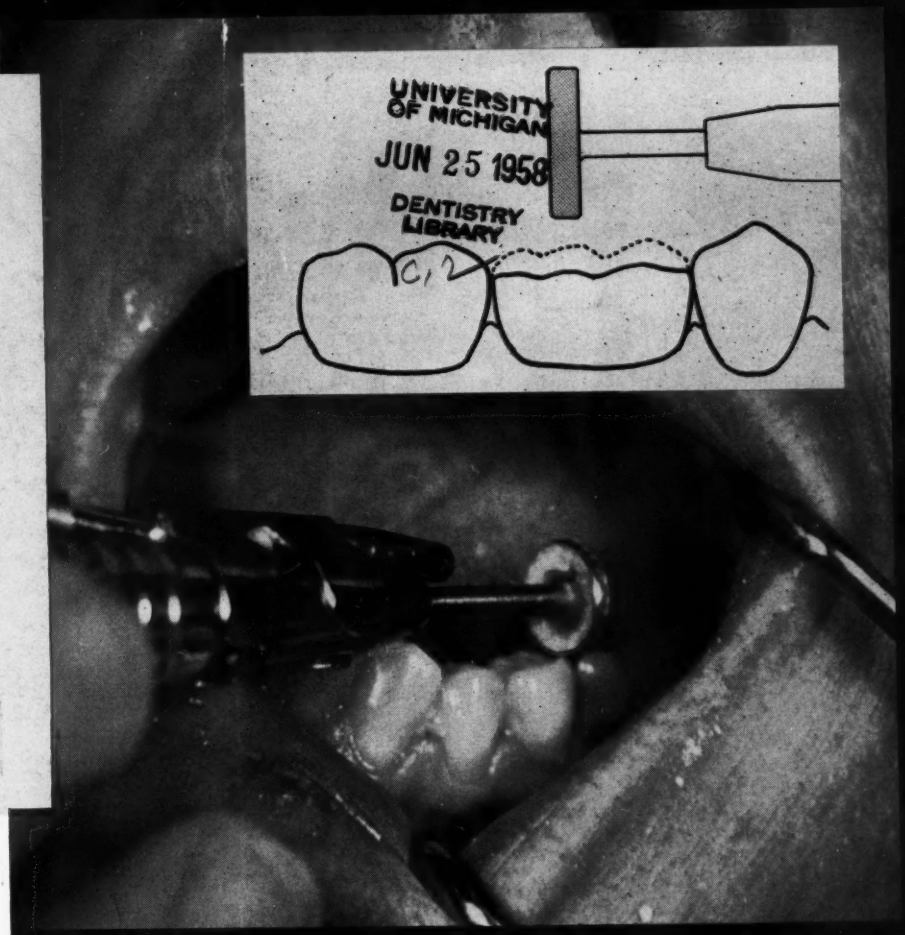
Dental Digest

UNIVERSITY OF MICHIGAN
JUN 25 1958
DENTISTRY LIBRARY
C, 2



June 1958

IN THIS ISSUE

stigation of Neuropath-
ogic Manifestations of Oral
ssue: Inheritance and Emo-
on as Related to Tooth
tructure Breakdown 252

ew Approach to Full Crown
reparation 256

tomic and Surgical Consid-
rations in Acute Neck Infec-
ons of Oral Origin 261

porary Splinting in Perio-
ontal Therapy 265

ouncement of Books
eceived 270

Courage to Live 270

Editor's Page 271

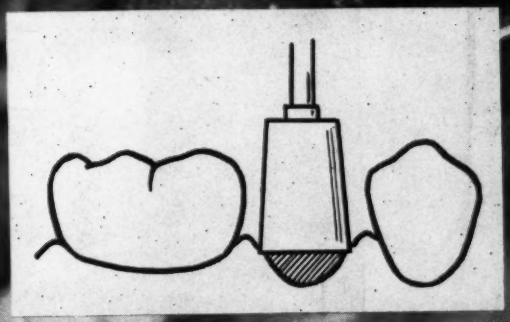
ical and Laboratory Sugges-
ons 272

licine and the Biologic
iences 274

tra-Angles 276

(*A Complete Table of Contents Appears on page* 251)

Cover illustration—
Owen Article, page 256



"Never before a porcelain of such exquisite beauty . . ."

Univac porcelain opens a new vista in esthetics that will be a tremendous asset in your practice. For here, at long last, is an entirely new and radiant lifelucent porcelain such as you've never seen before. Here, a glowing "aliveness"—new "living" colors and color dispersions have been integrated by advanced techniques and electronic processes to create natural 3-dimensional effects so brilliantly alive in the mouth that it is virtually impossible to distinguish them from vital teeth.

Do see Univac without delay! Your Universal Dealer will be glad to demonstrate them at your convenience. When you see the incredible esthetics that are at last realized with Univac—you'll surely insist upon them for your patients.

UNIVAC®

LIFELUCENT PORCELAIN ANTERIORS

SPECIFY WITH THE DUAL-DIAL COLOR GUIDE

NEW UNIVAC DENSE PORCELAIN GRINDS SMOOTHLY AND CAN BE POLISHED TO ITS ORIGINAL GLOSS AND FINISH.

Vol. 64, No. 6

Dental Digest

Registered in U.S. Patent Office

JUNE 1958

Investigation of Neuropathologic Manifestations of Oral Tissue: Inheritance and Emotion as Related to Tooth Structure Breakdown —Part One
Newton W. Mellars, D.D.S., and Frederick W. Herms, D.D.S. 252

A New Approach to Full Crown Preparation
Melvin M. Owen, D.D.S. 256

Anatomic and Surgical Considerations in Acute Neck Infections of Oral Origin
Louis C. Eskin, B.S., M.S.D., D.D.S. 261

Temporary Splinting in Periodontal Therapy—Part Two
Frank J. Fiaschetti, D.D.S. 265

Announcement of Books Received 270

The Courage to Live (An Abstract)
Felix Deutsch, M.D. 270

The Editor's Page 271

Clinical and Laboratory Suggestions 272

1. Prevention of Finger Staining; 2. Endodontic Technique; 3. Sprueing of Wax Pattern; 4. Trimming Models; 5. A Quick Sedative Base. 6. Storage of Handpieces.

Medicine and the Biologic Sciences 274

Contra-Angles 276

About Our CONTRIBUTORS

NEWTON WILLIAM MELLARS, D.D.S. (College of Physicians and Surgeons, School of Dentistry, San Francisco, 1921), and his co-author, FREDERICK WILLIAM HERMS, D.D.S. (College of Physicians and Surgeons, School of Dentistry, San Francisco, 1906) have conducted the research project which is reported in their present article for a period of twelve years entirely at their own expense. The results of the investigation are presented in the current issue, INVESTIGATION OF NEUROPATHOLOGIC MANIFESTATIONS OF ORAL TISSUE. This is a four-part presentation.

MELVIN M. OWEN, B.S. (Long Island University, 1944), D.D.S. (New York University, College of Dentistry, 1946) is a general practitioner who has published several articles on dental subjects. For his first appearance in DIGEST Doctor Owen presents an illustrated article. A NEW APPROACH TO FULL CROWN PREPARATION, which describes a new type of diamond stone.

LOUIS CHARLES ESKIN, B.S., M.S.D. (Temple University, School of Dentistry, 1920), D.D.S. (Temple University, School of Dentistry, 1925) limits his practice to oral surgery and is co-author of a book, *Diseases of the Eye, Ear, Nose, and Throat*, published in 1950. For his second presentation in DIGEST, Doctor Erskin's article is ANATOMIC AND SURGICAL CONSIDERATIONS IN ACUTE NECK INFECTIONS OF ORAL ORIGIN.

FRANK JOHN FIASCHETTI, B.S. (Syracuse University, 1937), D.D.S. (University of Pennsylvania, 1946) is a specialist in oral diagnosis and periodontics and a former contributor to DIGEST. This month he presents the second and final installment of his article, TEMPORARY SPLINTING IN PERIODONTAL THERAPY.

EDWARD J. RYAN, B.S., D.D.S., Editor
WANDA T. PICKARD, B.A., Assistant Editor
708 Church Street, Evanston, Illinois

Copyright, 1958, by Dental Digest, Inc. See page 248 for subscription data, etc.
The magazine is mailed on the fifteenth of the month of issue.

Investigation of Neuropathologic Manifestations of Oral Tissue: INHERITANCE *and* EMOTION *as Related to Tooth Structure Breakdown* – Part One

NEWTON W. MELLARS, D.D.S.,
and FREDERICK W. HERMS, D.D.S., San Francisco

DIGEST

In the concept described in this article, the first in a series of four, the true etiology of dental pathologic conditions is placed as "primary" and is considered to be genotypic. "Secondary" influences accelerating the processes of structural breakdown in enamel (genotypically weak) dental pulp and dentine, vary and differ considerably in character in each instance. In enamal, for example, normal physical forces of mechanical stress during mastication appear singularly predominant in causing enamel disintegration. Dentine, however, reacts under multiple forces, some mechanical, some chemical, some bacterial to accelerate breakdown. Pulp tissue reacts catabolically at times under forces of emotional stress to produce stromatic pathologic changes in pulp and painful reactions in teeth and associated structures, even though no tooth cavitation occurs. The purpose of this article is to clarify these phenomena.

Terminology

As new combinations of "primary" and "secondary" forces at work are found, it seems inappropriate to consider the terms "caries" and "decay" sufficient to explain the "secondary" processess of the breakdown of tooth structure. A more neutral term, such as enamel or dentine "cavitation," would appear useful. This leaves the more exact pathologic processes subject to explanation as they are demonstrated clinically.

Critical Units of Investigation

In this research, cell structures, their associated organella and their reactions during life are the critical units of investigation. Individual cells during their initial growth cycles are found to specialize according to a well-established genotypic pattern. Such specialized cells form into cell systems which, when joined collectively, compose a whole organism or tissue structure such as a tooth, gland, capillary, nerve structure, bone.

Interrelationship of Cell Reactions—Such systems at times become subject to interrelated cell defensive reactions during certain periods of catabolisis. The manner in which one system influences another is important diagnostically and therapeutically.

Mobilization for Metabolic Efficiency—Whereas all systems of cells join forces to motivate and metabolize an organism, there are also notable relationships in the ratio of interdependence of one system on another in order to maintain in the greatest degree metabolic efficiency and synchronization throughout the whole organism. The final defensive mechanisms which establish during cell system development apparently are quite definitely interrelated to the gene system potentialities, whatever they may be.

Establishment of Protective Characteristics—The complicated agencies of the genes (not readily observable) appear to deserve full credit for establishing, in the embryo, certain protective characteristics which later lead to good or bad defensive measure in cells, as they operate to protect against destruction.

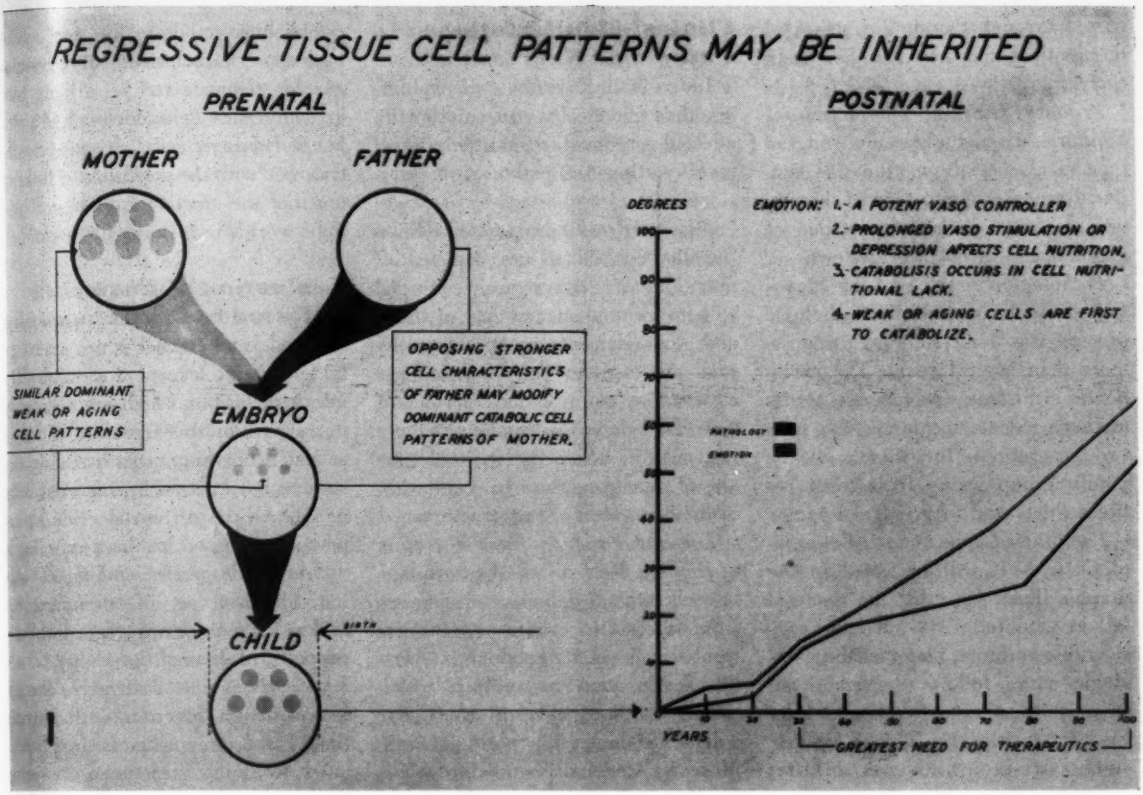
Functional Familial Likenesses

Studies of cells and tissues in collective patients show dental pathologic processes and abnormalities to differ considerably in type and kind among collective family members. Frequently, however, consistent familial likenesses are found in cell mechanisms in individually established pathologic changes and generalized immunities.

Disorder Similarities Diagnostic Aids—It is imperative in history-taking to include as a diagnostic aid all available familial data of disorder similarities among family members. Such information will bring out important retrograde functional familially specialized cell changes and characteristics.

Weak Inherited Structures—It is emphasized that pathologic processes in the true meaning of the term are not necessarily transmissible, but weak inherited structures leading to subsequent cell breakdown and pathologic changes surely are.

Example: Cells which (1) function habitually below normal, (2) harbor certain inabilities to defend successfully, (3) lack the facility to utilize oxygen in the most efficient manner in order to continue normal metabolism throughout life, (4) age too soon and build huge molecules of protein within the cell, (5) fail to syn-



1. ***Theoretical graph. Illustrating a concept of a progression of inherited and transmitted cell weakness characteristics passed down from a dominant mother to her child. This graph represents an average number of cases falling into such a pattern. Shows similar curve characteristics of pathology and emotion; also the average adult age when generalized therapeutics become critical.***

thesize normally, and (6) encourage retrogressive transformations toward fibrosis, chondrosis, calcification.

Tendencies May be Present Before Birth: Many deteriorative changes can be present even before birth and be stimulated in time to develop similar chronic pathologic processes of a prior generation. This point of view may be difficult to understand in view of former teachings which imply that at birth the organism is wholly normal.

Deficiencies in Genetically Weak Cells: Much evidence indicates that genetically weak cells cannot metabolize as normal cells do, probably because they lack, completely or in part, protoplasmic organella properties present only in normal cells. Hemophilia is an example.

Clinical Evidence of Transmissible Weakness—Why do tissues of family offspring show likenesses to parental structures, especially in their like tendencies and potentials to succumb or defend themselves during catabolisis or attempted anabolisis, is a question that frequently arises. Based on the investigation of hundreds of cases, both objective clinical evidence and laboratory results point to inheritance and transmissible weaknesses in cell structures as an answer to this question.

Prognostic Value — Such findings emphasize a reason for giving careful consideration to therapeutics, and temper the desire to be over-optimistic as to the degree in which pathologic problems may be reversed to normal function. This point is more clearly illustrated in the section of this article dealing with pathologic pulp processes.

Theoretic Concept Illustrated—Figure 1 outlines theoretically a concept of a progression of weak cell characteristics of a mother transmitted to her child. The over-all graph illustration of this case represents many hundres of histories of other cases dealing with chronic problems of pathologic progression. This case, picked at random from among our files, illustrates certain cell regressions demonstrated clinically and microscopically.

Weak Gingival Capillary Endothelium—The problem here is predominantly one of weak gingival capillary endothelium resulting in (1) fragility, (2) alveolar resorption of an uneven character, (3) continuing gingival hypertrophy, and (4) loss of teeth at an age of fifty years.

History Duplicated—Following the graph, this mother is observed imparting to the embryo and subsequent child dominant potentialities of mesendermal cell weakness which in time will develop into a duplicating periodontic disturbance. The case history of the female child who attains the age of thirty-two shows that she has

passed through the similar stages of the mother and has lost her teeth early.

Primary Gingival Characteristics Similar — Even the specified uneven type of alveolar resorption was similar. Response to any type of therapy was negative during the stages of gingival and alveolar breakdown.

Pathologic Process of Long Standing—In both instances the pathologic process was long standing, that is, more than several years. The periodontic syndrome was common to the mother's side of the family for over two generations, the women of the family group losing their teeth between thirty and fifty years of age.

Pathologic Curve Follows Emotional Curve — It will be noted in the graphic illustration that the rise and fall in amplitudes do not have considerable variance, also that the pathologic curve follows the emotional curve quite consistently. The greatest need for therapeutics of one kind or another arises about the age of thirty.

Further Supposition Presented — Besides inheritance it is suggested that long term cycles of emotional tensions operating through the central nervous system directly influence the vaso channels, more particularly the capillaries, only to interfere finally with normal function. In this mechanism of action tissue demands are not adequately met with respect to required nutritive capillary fluids.

Illustration of Emotional Effects— In prepared tissue sections of affected areas, in some extensive capillary enlargement and engorgement was observed, while in others capillary collapse abounded in comparison with normal sections. (A) In emotionally depressed cases sections show more collapsed capillaries; (B) in emotionally excited cases sections show more enlarged and engorged capillaries than normal.

Causal Factor Established — These phenomena occurring consistently in emotionally stressed patients established beyond supposition a factual reason for certain capillary breakdown when component capillary endothelium structures are already genotypically weak, even before birth.

Clinical Manifestations of Pathologic Regression

Individualized systems of capillaries, thus genetically and emotionally affected, produce in time the clinical manifestations of pathologic regressions.

Defense Process Stimulated—Emotionally stressed tissues depleted of nutrition or, conversely, engorged with overabundant amounts of fluids and blood elements are stimulated by such processes to defend themselves as best they can over long periods of time. They do so inadequately in those instances in which the span of time allows transformations to occur within the connective tissue structures.

Lowered Function from Operation of Defense Mechanism—Unfortunately each stage of defensive mechanism from fibrosis to calcification always results in lowered function: irreversibly so. In many instances in which tissues are incapable of even poor defense it is noted that early autolytic processes are established before transformation processes begin. This latter process is quite commonly found in periodontosis wherein low-grade connective tissue predominates.

Tooth Enamel Weakness and Causes

The dentist is confronted with a universal problem of cavitation of tooth enamel. Many reasons have been advanced to account for the widespread occurrence of this rampant condition. General research assigns the etiologic changes of enamel disintegration to bacterial action or their products. The hypothesis that bacteria or their toxins, found in the oral cavity, are sufficiently lytic to be the cause of enamel cavitation after teeth are once erupted, is not acceptable.

Acceptable Concept — The mechanisms whereby dentine, a connective tissue more organic in structure, may be disintegrated not only by bacterial action but also by oral enzymes, mechanical trauma, thermal factors, can, however, be understood.

Inherent Complexities Studied — The inherent complexities which relate the biophores as determinants in establishing ectodermally, a structure basically characteristic of crystalographic elements and yet arising biologically must be understood. Ameloblasts (biologic cells) are genetically endowed with the potentials of linking together the crystalographic and biologic worlds in forming tooth enamel.

Evaluation of Enamel in Relation to Crystalography

Ectodermal enamel is not soft, nor is it organic except for extremely minor inclusions which are decidedly not a part of this structure. Enamel as a structure supported by living tissue but not in itself having vital cells or the abilities of reproduction or repair once formed has been examined.

Special Properties of Enamel—An individualized set of circumstances arises for conjecture regarding the property of enamel, its ability to defend itself against destructive forces, its resistance, function, and destruction. These circumstances are not related to living structures. It seems obvious that the evaluations placed upon enamel must be those common to studies in crystalography.

Properties Related to Function — In many respects enamel possesses characteristics of the crystal world: (1) hardness, (2) cleavage, (3) prismatic characteristics, (4) axis, (5) color, (6) fluorescence, (7) specific gravity, (8) ability to diffract light, and (9) x-rays. It would seem that such properties might in some respects explain what should be expected of enamel, especially in regard to resiliency, repair, and as a protector of dentine.

Important Determination—The fact that enamel is related to a living cell at all is an important determination, for it emphasizes the fact that at a particular developing stage, the primary structural elements were influenced by biologic mechanisms which were subject to genetic characteristics; in other words, inheritance potentials of the primary germ layers, and before these, the transmitted gene system common to the gametes.

Fundamentals of Enamel and Dentine Studied—J. G. Helmcke at the

Freie University, West Berlin, Germany has successfully resolved, by means of the electron microscope and also by x-ray diffraction pattern, the crystalographic system of tooth enamel which he determines as belonging to the hexagonal and rhombohedral crystalographic system.

Measurements of Crystals — The primary crystals of enamel or true structural elements he measures as hexagonal crystals from 500 to 1000 millimicrons in length, and 5 to 10 millimicrons in width. The magnifications employed in his studies are from 5,500 to 60,000. The crystals are submicroscopic and cannot be studied with the ordinary light microscope. He relates the rhombohedral type of crystal to a modification of the true hexagonal crystal under certain conditions of regression.

Hexagonal Crystal of Interest—Of special interest is Helmcke's determinations of the character and nature of the hexagonal crystal which he has clarified in excellent electron photomicrography.

Inheritance Deviation — The linkage of the crystalographic to the biologic mechanisms of crystal origin has prompted examination of the influence of inheritance deviations. In this situation evidence has been found to indicate that, whereas the crystals of enamel do occupy a true crystalographic formation, the arrangement of the crystals in periodic structure as examined under the polarizing microscope are not always normal.

Flaws Observed — Many apparent flaws were observed to exist in a body of enamel at varying depths from outer surface to inner dento-enamel junction. At all ages of teeth examined, that is, from extremely young to extremely old patients, flaws appear in enamel sufficient to allow early breakdown when subjected to forces of ordinary mastication. These flaws are not peculiar to either sex, they occur consistently in both in similar ratio.

Eight Types Classified—Under the polarizing microscope eight different types of flaws have been classified. At first these manifestations of weaknesses were considered to arise from metabolic disturbances of the mother during ontogenesis. Clinical studies, however, present strong implications that such flaws are more probably transmitted from one generation to another.

Similarities Noted—These conclusions are based on findings that first cavitations of the enamel, evident in an offspring, in numerous instances occur on a certain tooth and on a certain surface of that tooth which, when related to a dominant parent, present a similarity, both as to time of development and position.

Example Cited—A mother was observed who had her first cavity at the age of six in an occlusal or a buccal pit of a lower right first molar; her child, who duplicated her more general traits, also developed a similar cavity at the age of six in a similar position.

Tendencies to Duplication Noted—In an individual case, and in many other instances, the tendencies of cavities on the right side of the dental arch were observed to duplicate in position cavitations on the left side; for example, a distal cavity of the upper right cuspid duplicating a distal cavity of the upper left cuspid.

Dual Potentials Present—The tendency to duplication brings to mind the fact that dual potentials are present in the primary cells wherein similar development of right and left structures occurs.

Characteristic of the Gene System—That duplication of structure is a genetic possibility stresses the fact that this property is primarily a characteristic of the gene system. Much evidence of a more general anatomic nature exists to show that familial similarities are transmitted from one generation to another.

Cell Pattern Transmitted—It would seem certain that weakness patterns in systems of cells must certainly be handed down from one generation to another and that a pattern which was experienced in one parent could be duplicated in a child of that parent, provided dominancy were sufficient.

Progress Toward Establishing Proof

Research both here and abroad reports continuing progress toward establishing proof that certain chemical molecular constants within the chromosome and gene system bear likeness during transmission from one generation to another, and in instances illustrated, in the same generation where right and left dual structures show similarities.

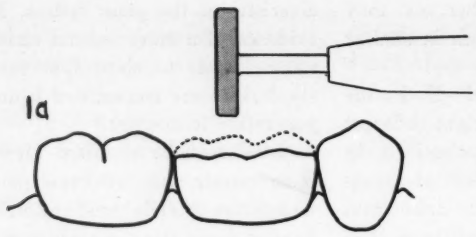
Important Contribution—Crick and Watson[1] have for the first time demonstrated in their study chemical mechanisms and formulae peculiar to cell duplication.

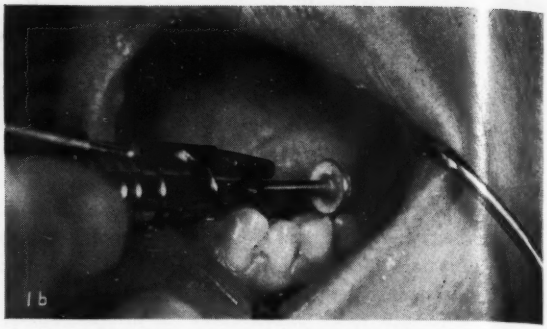
Method of Determining Chemical Constant—These investigators present clearly a method of determining chemical constants as exemplified in the amounts and kinds of nucleic acids present during cell duplication, particularly desoxyribonucleic and nucleic acids.[1] As stated by these authors, a strong reason exists to support the contention that both strong and weak cell characteristics are part of the gene system and are transmissible from one generation to another.

(*End of Part One*)

1607 *McAllister Street*

[1]Crick, F. H. C., and Watson, J. D.: The Structure of the Hereditary Material, Scientific American (Oct.) 1954, pp. 31-45.





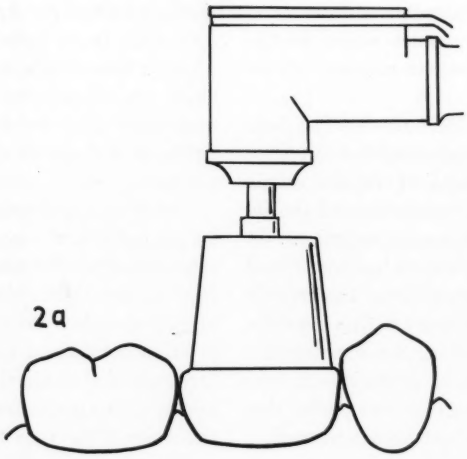
1A *and* **1B.** *Reduce the occlusal with a wheel stone.*

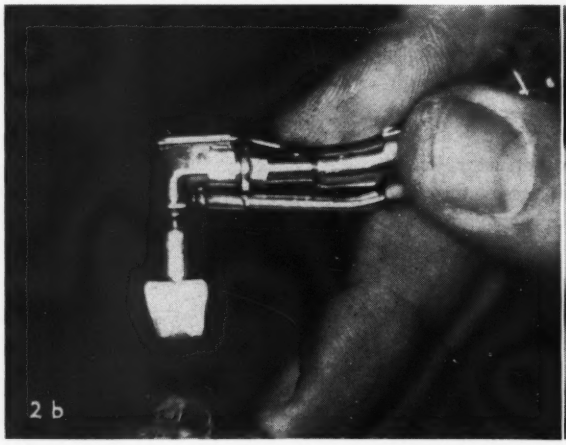
DIGEST

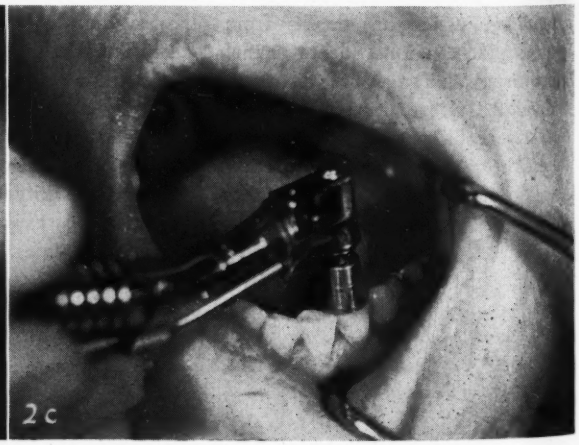
The increased use of full coverage for abutment teeth for splints and fixed bridges has led to the development of many abrasive instruments and techniques. In these techniques an attempt has been made to solve the difficult problem of producing a preparation that has a smooth tapered shape with a definite finishing line and is devoid of sharp angles and undercuts. With all of these operative procedures in use, however, employment of the hazardous disc is still necessary. This article describes a new type of diamond stone that makes the full crown preparation a relatively simple procedure. This instrument in addition to a wheel stone and a tapered stone are all the armamentarium required. Step-by-step directions are given for the numerous applications that are possible with this instrument.

A New Approach to FULL CROWN *Preparation*

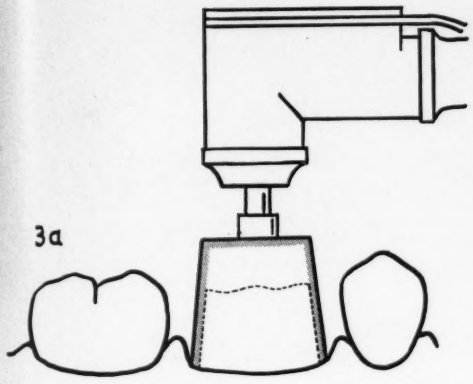
MELVIN M. OWEN, D.D.S., Brooklyn, New York

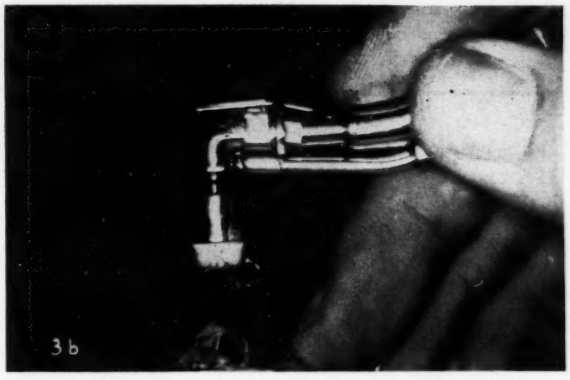






2A, 2B, *and* **2C.** *Select largest hollow stone that will fit mesiodistally without interfering with the contacting teeth.*





3A *and* **3B.** ***Carry the stone gingivally until the preparation is at the proper depth on the mesial and distal.***

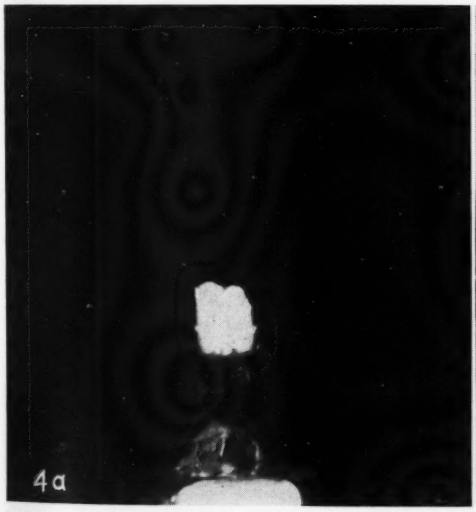
New Diamond Stone Developed

With the use of a newly developed stone* the four corners of the teeth are automatically rounded, a definite finishing line is produced in the form of a shoulder, a smooth tapered preparation results in a minimum of operative time and the use of discs is made unnecessary.

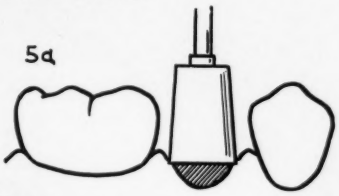
Description—These instruments are hollow stones, tapered toward the shank, with diamond abrasive on the *inner walls* and *edge* of *the stone.* There are openings surrounding the shaft to allow water to spray directly on the tooth. They are made in seven sizes to accommodate all molars and bicuspids.

Method of Operation—The stones operate (1) by cutting within the tooth, with the inner walls automatically tapering the tooth as the stone is carried toward the gingiva (Fig. 2A), or (2) by abrasive action produced by moving the stone from side to side

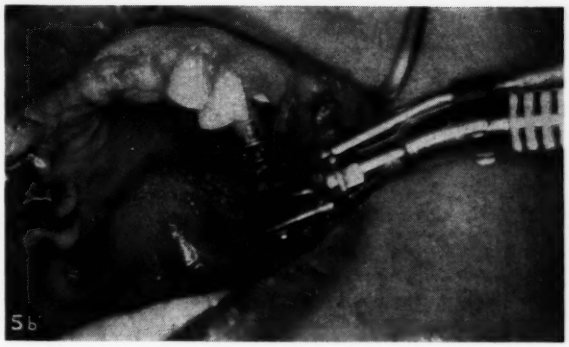
**The Owen Diamond Stone.*

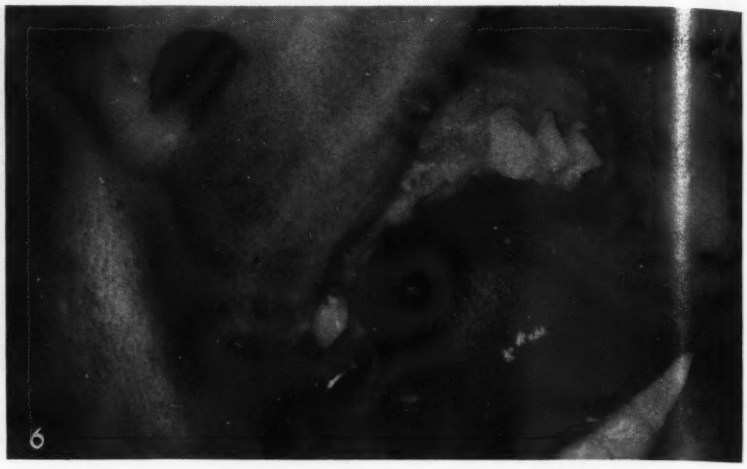


4A *and* **4B.** ***Preparation completed using only the wheel stone and a hollow stone. The shoulders are then beveled to allow for an apron of gold.***



5A *and* **5B.** ***In some cases the buccal or lingual shoulders will not be carried under the gingival margin when the proper depth is reached on the mesial and distal.***



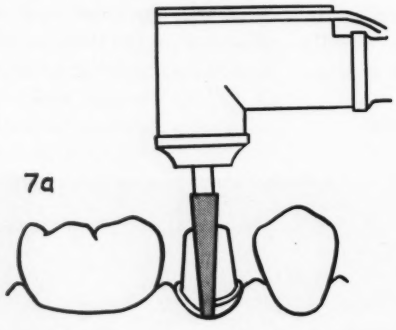


6. ***Teeth with labial shoulder above gingiva after use of hollow stone.***

in its position over the tooth (Fig. 11). Since most teeth are not round, both of these actions are usually employed. For example, a hollow stone cutting through the mesial and distal marginal ridges will extend over the buccal and lingual walls. The stone must be moved buccally and lingually to reduce these surfaces and the resultant tooth form will generally approximate the original rectangular form.

Procedure

Preparation of Average Tooth — In a case where the mesiodistal diameter is almost as great or greater than the buccolingual diameter, the following steps are taken:



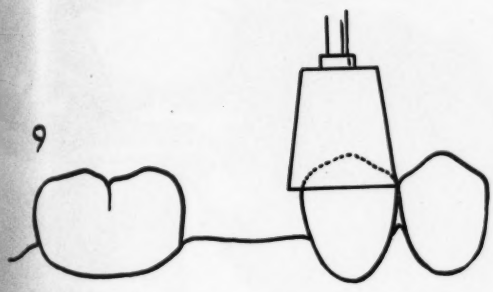
7A *and* **7B.** *A tapered stone is used to bring the remaining portions of the shoulder subgingivally.*

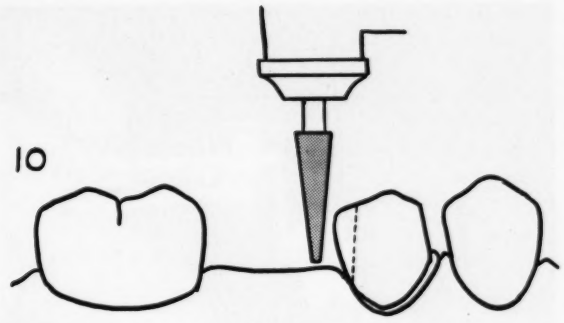
(1) Reduce the occlusal surface with a wheel stone (1A, and 1B). This produces a step into which the hollow stone can be set, avoiding the possibility of using too large a stone and nicking the adjacent teeth.

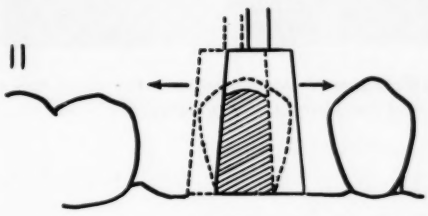
(2) Select the largest hollow stone that will fit mesiodistally without interfering with the contacting teeth (Figs. 2A, 2B, and 2C). As the stone, rotating at operative speed, is carried toward the gingiva, it cuts within the marginal ridges, automatically tapering the tooth and rounding the four corners. The stone is carried to the desired depth on the mesial and distal (Figs. 3A, 3B, 4A, and 4B).

(3) If any of the buccal or lingual surfaces are not contacted in the initial downward movement, the stone is moved buccally and lingually to reduce those areas. In some instances the buccal or lingual shoulder will not

8. ***Completed preparation after using the wheel stone, hollow stone, and tapered stone.***



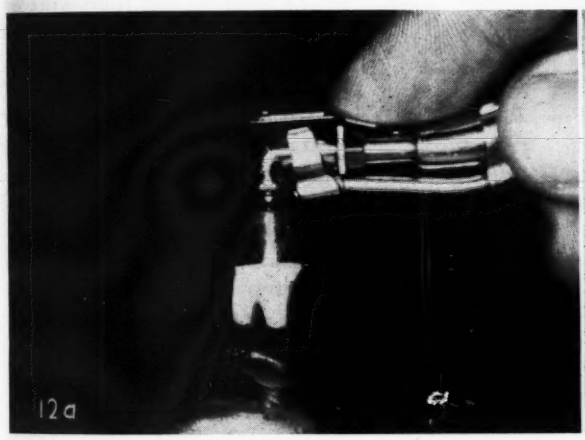


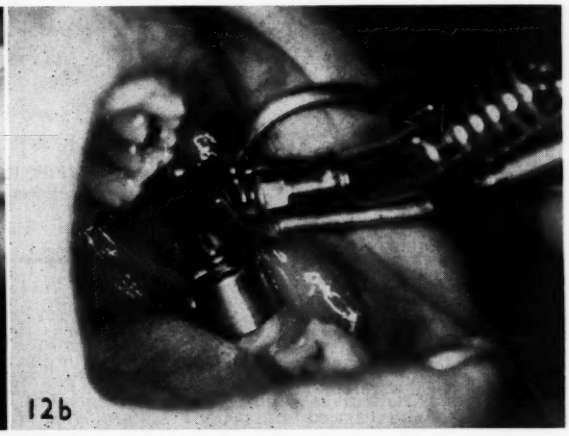


9. *For teeth whose buccolingual diameter is much greater than the mesiodistal diameter and there is only one contacting tooth, use a larger hollow stone and let it extend over the edentulous area.*

10. *Use a tapered stone to complete the preparation.*

11. *A tooth standing by itself can be prepared by surface grinding rather than cutting through the tooth structure, by selecting a larger stone and moving it buccally, lingually, and mesially and distally.*





12A *and* **12B.** *For tipped teeth, keep contra-angle parallel to the normal occlusal plane and carry the hollow stone gingivally until the mesial or distal surface is at its inferior border.*

be carried under the gingival margin when the proper depth is reached on the mesial and distal (Figs. 5A, 5B, and 6).

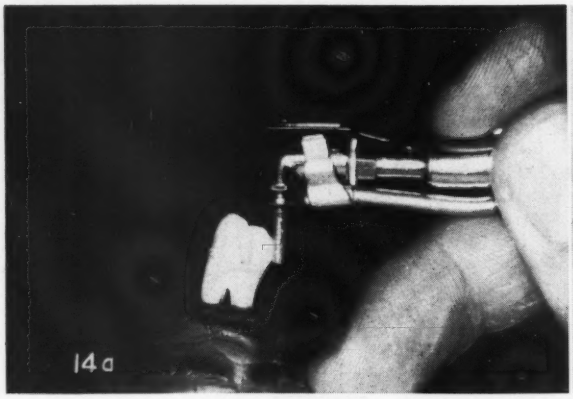
(4) A tapered stone is then used to carry the shoulder subgingivally wherever necessary (Figs. 7A, 7B, and 8).

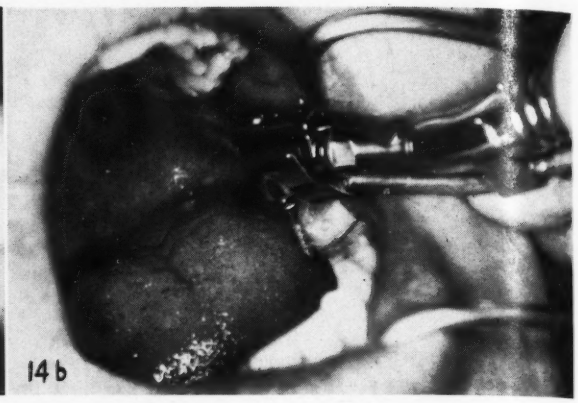
Method of Preparation when the Mesiodistal Diameter is Much Less Than the Buccolingual Width — (1) The hollow stone can only be carried gingivally until the proper width of the buccal or lingual shoulder is reached.

(2) Tapered stones are used to complete the preparation.

(3) If the tooth, however, has only

13. *After use of hollow stone. Shoulder can be seen above gingival at mesiolingual and mesial surfaces.*





14A *and* **14B.** ***Tapered stone used to bring these areas under gingiva and complete mesial surface.***

one, or no teeth contacting it, a stone that is measured by the buccolingual width is used (Fig. 9). This stone would then extend over the edentulous area.

(4) A tapered stone is used to complete the untouched surface (Fig. 10).

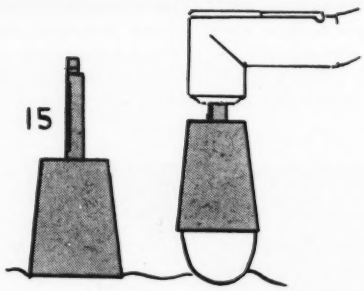
Variation in Technique — A tooth with no contacting teeth on the mesial and distal can be prepared by placing a stone larger than the tooth over the tooth. The stone is moved mesially, distally, buccally, and lingually, reducing these surfaces until the desired shoulder is produced (Fig. 11).

Paralleling Tipped Teeth—The contra-angle is held parallel to the normal occlusal line and carried gingivally until the mesial or distal, as the case may be, is carried to its inferior border (Figs. 12A, 12B, and 13). A tapered stone is then used to bring the shoulder on the tipped side under the gingiva (Fig. 14A, and 14B).

Paralleling Multiple Abutments—A simple procedure is to leave the stone used in preparing the first tooth in place while the next tooth is prepared. By keeping the shafts of the two stones in line, a parallel preparation results (Fig. 15).

Removal of Shoulder — When a shoulder preparation is not desired the hollow stones can be brought to

(*Continued on page* 264)



15. ***The stone used in preparing one tooth is left in place while the next tooth is being prepared. By keeping the shafts in line a parallel preparation results.***

16. ***The band is first annealed, the gingival border contoured and the occlusal surface flattened.***

17. ***While maintaining gentle thumb pressure, to keep the band from riding up the tooth, a pinch is made at the gingival border to produce a well-fitting band.***

Anatomic and Surgical Considerations in ACUTE NECK INFECTIONS *of Oral Origin*

LOUIS C. ESKIN, B.S., D.D.S., M.S.D., Philadelphia

DIGEST

The acute forms of oral infections which manifest themselves by spreading into various fascial planes of the face and neck have always been considered serious. The patient in these cases is usually more concerned with the facial distortion and discomfort then with the grave sequelae involved. When these infections are neglected or inadequate treatment is applied, grave complications and fatal termination are not uncommon. Once the pus has penetrated through the periosteum of the mandible, the process becomes more diffuse and complicated. This article describes the anatomic relationship of the areas which may be invaded and presents a step-by-step description of the surgical technique which may be used to obtain drainage in these cases.

Methods of Inflammatory Extensions

Infections and inflammatory processes extend by continuity through the blood vessels or lymphatic channels into the various neck spaces, invading areas surrounding glands, both mucous and lymphatic in character.

Vital Structures May be Invaded—In some types, transverse barriers limit the suppurative process to a confined or circumscribed area, while in others the infection penetrates deeper and more vital structures, frequently extending down to the clavicle.

Discoloration and Pain Symptomatic—The tissues become more or less discolored with intense pain presenting the symptoms of an acute inflammation.

Surgery Necessary for Evacuation of Pus—Since the advent of the sulfa drugs and antibiotics, the therapeutic treatment of these conditions has been greatly facilitated. Surgical interference, however, is still required for the evacuation of pus. The intraoral evacuation of pus may often be accomplished by a simple puncture, at the greatest point of distention or fluctuation, with less anatomic consideration and fear of surgical trauma. This discussion is limited to surgical aspects by the extraoral approach.

Anatomic Relationship of Areas Involved

To discuss intelligently these pathologic processes and their surgical treatment, it is of primary importance to consider the mandible in anatomic relationship to the spaces and fascial planes of the neck. These so-called spaces, by virtue of their anatomic position and relationship, are frequently involved by the extension of dental foci, causing characteristic symptoms.

Lines of Cleavage Become Pathways—In reality, these spaces are lines of cleavage, normally filled with areolar connective tissue which, when invaded by transudates of infective organisms, become true pathways, formed by the muscle and fascia limiting boundaries.

Specific Areas Considered—The spaces to be considered about the mandible are 1) the pterygomandibular and masseteric, 2) submaxillary, 3) pharyngomaxillary, and 4) the submental, including the areolar tissue in the floor of the mouth.

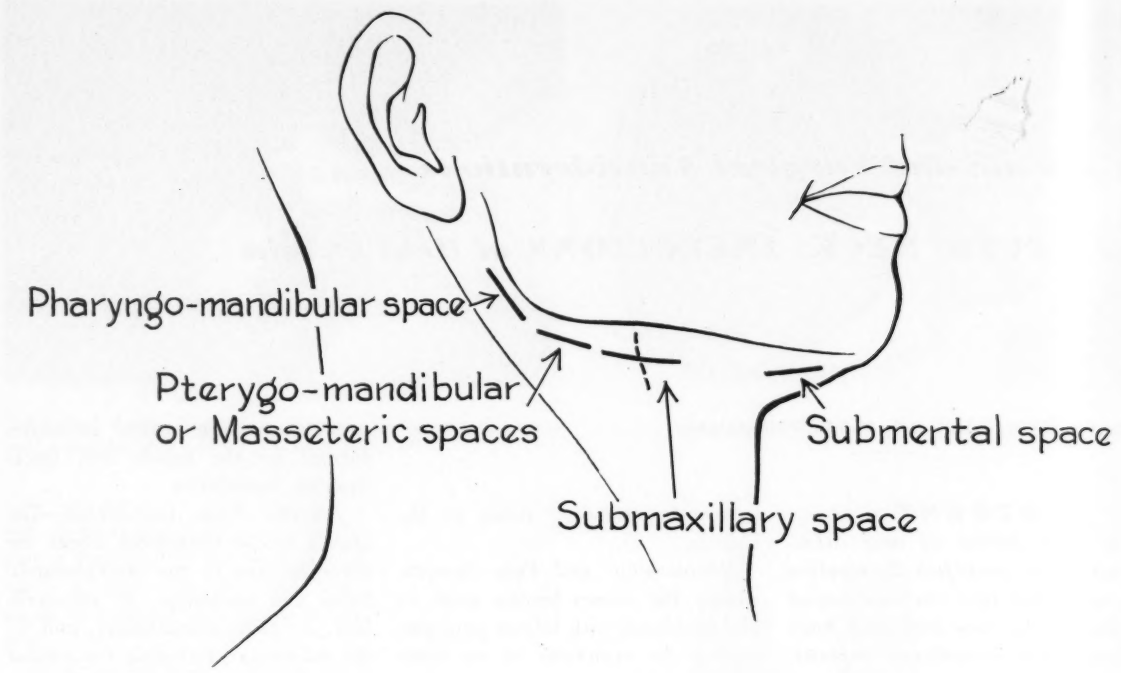
(1) The Pterygomandibular and Masseteric Spaces

These areas may be described as a "fascial sling," formed by the two muscles of mastication; namely, the internal (medial) pterygoid medially, and the masseter, laterally, with the ramus of the mandible. This "fascial sling" is, in reality, the fascial covering of the masseter and internal pterygoid muscles, which reinforces the mandibular periosteum inferiorly.

Boundaries Defined—Thus, the boundaries of these spaces are, posteriorly, the parotid gland, neck and ramus of the mandible, and the styloid process of the temporal bone; posteroinferiorly, the stylomandibular ligament and posterior belly of the digastric muscle; posterolaterally, the pharyngomaxillary space; and anteriorly, the external maxillary artery and anterior facial vein.

Pterygomandibular Space—Individually, the pterygomandibular space is actually the area between the attachments of the internal pterygoid muscle medially and the mandible, laterally.

The Masseteric Space: This is the region within the attachments of the masseter muscle laterally and the mandible, medially.



Barrier Formed Against Extension: The fascia of the masseter and internal pterygoid muscles reinforces the firm attachment of periosteum at the inferior border of the mandible to form a strong barrier against extension of infection into the neck. Infections originating in the molar area, therefore, will in many cases become circumscribed in either one or both spaces.

Surgical Approach

To obtain drainage from the pterygomandibular or masseteric space, the following steps are taken:

1. An incision is made at and beneath the angle forward to a point slightly under the inferior border of the mandible.

2. The incision is carried through the subcutaneous tissue, upper layer of superficial fascia, fascial expansion of masseter and internal pterygoid muscles down to the periosteum.

3. Either the pterygomandibular or masseteric space may be entered through the one incision. The hemostat is placed into the wound and carried upward close to the medial aspect of the ramus for entrance to the pterygomandibular space, or laterally to the ramus to enter the masseteric space.

Edematous Tissue in Pathologic Processes—In the normal person there exists between the skin and ramus but several millimeters of subcutaneous tissue, while in the presence of pathologic processes and accumulated transudates, the scalpel must traverse several centimeters of edematous tissue to reach the bone. It is, therefore, of vital importance that the operator keep in mind the anatomic relations and landmarks in this region.

Relationships to be Observed—These landmarks are (1) the lower border of the body of the mandible, (2) the angle of the mandible, and (3) if palpable, the anterior border of the sternomastoid muscle.

(2) The Submaxillary Space

This area is bounded superolaterally by the lower border of the mandible; superomedially, by the mylohyoid muscle; anteriorly, by the anterior belly of the digastric muscle; medially, by the hyoglossus muscle and laterally, by the fascia of the neck and platysma muscle.

This space may be invaded by foci originating in the lower molar or bicuspid teeth.

Surgical Approach for Drainage in the Submaxillary Space

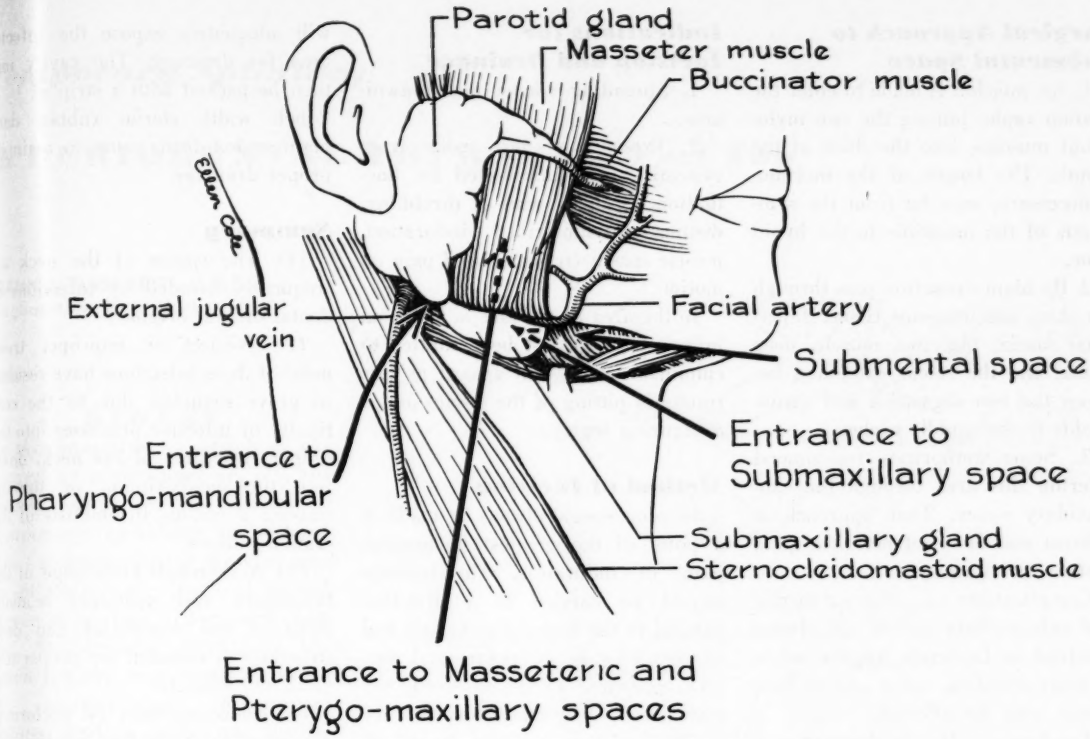
1. A transverse incision is made anterior to the anterior border of the masseter muscle, parallel to, and about a finger's breath below, the lower border of the body of the mandible and is carried forward about one inch.

2. This approach is selected to avoid surgical severance of the external maxillary artery and anterior facial vein, lying close to the lower anterior border of the masseter muscle.

3. The incision is passed down through the skin, subcutaneous tissue, and superficial fascia to the platysma muscle.

4. A second incision is made diagonally downward and forward in the direction of the fibers of the platysma muscle. This is recommended as an improved surgical procedure in preference to separating the fibers of the platysma muscle transversely.

5. Having entered the space, the first observation is to locate and



identify the glistening white fibrous intermediate tendon joining the two bellies of the digastric muscle. This tendon is fixed to the hyoid bone by a fibrous loop derived from the deep fascia of the neck. The location of this tendon establishes the lower boundary of the submaxillary space.

6. Exploratory approaches can be made from here, anteriorly into the submental space; posteriorly into the carotid triangle and posterosuperiorly into the pharyngomaxillary space. This approach may also be used for the removal of the submaxillary gland.

(3) The Pharyngomaxillary Space

This area lies between the constrictors of the pharynx and the masticatory apparatus, or more closely, between the superior and middle constrictors and the internal pterygoid muscle. This is the space commonly involved when swelling and fluctuation appear in the neck below the angle of the jaw.

Boundaries—The space is limited anteriorly by the pterygomandibular raphe and the posterior fibers of the mylohyoid muscle; laterally, by the superior and middle constrictor muscles of the pharynx; posteriorly, by the deep part of the parotid gland and styloid muscles; inferiorly, the space is continuous with the carotid sheet; medioanteriorly by the medial surface of the internal pterygoid muscle.

Tissue Mass Forms Barrier—Posteriorly, the mass of tissue makes it impossible to pass from the pharyngomaxillary space into the retropharyngeal space without the use of force.

Surgical Approach to the Pharyngomaxillary Space

This measure is relatively simple, even in the presence of a distending edema:

1. With the head of the patient turned to the opposite side, an incision is made behind the angle of the mandible, in front and parallel to the sternomastoid muscle.

2. This incision is carried through the skin and capsular fascia.

3. The parotid gland, if large enough to intrude, is readily displaced upward, a dissecting scissors or narrow hemostat is carried inward and upward along the internal pterygoid muscle. This blunt dissection opens the entire pharyngomaxillary space through a simple skin incision.

4. If necessary, the submaxillary area below the mylohyoid muscle may be explored and by blunt dissection of a more vigorous character the confines of the pharyngomaxillary space may be passed and the anterior paralingual spaces entered.

(4) The Submental Space

The region between the two anterior bellies of the digastric muscles laterally, the mylohyoid muscle above, the fascia of the neck, and platysma muscle anteroinferiorly is the submental space. This region is usually invaded by infections from the lower anterior or bicuspid teeth.

Surgical Approach to Submental Space

1. An incision is made to enter the median raphe joining the two mylohyoid muscles, into the floor of the mouth. The length of the incision, if necessary, may be from the symphysis of the mandible to the hyoid bone.

2. By blunt dissection pass through the skin, subcutaneous tissue, superficial fascia, platysma muscle, deep fascia, and the sulcus extending between the two digastrics and geniohyoids to the middle raphe.

3. Some authorities recommend entering this area through the submaxillary space. That approach is indirect and does not permit a good avenue for drainage.

Complications — The submental and submaxillary spaces are always involved in Ludwig's Angina, while in acute cellulitis, either one or both spaces may be affected.

Tracheotomy May be Imperative— A frequent complication is edema of the larynx with respiratory obstruction causing asphyxia and possible death. In this event, the prompt performance of a tracheotomy is imperative to supply a free airway.

Indications for Incision and Drainage

1. Spreading edema and brawniness.

2. Presence of pus, aside from systemic signs, manifested by fluctuation, localized pain or throbbing, distinct circumscribed induration, muscle spasm (trismus) and pain on motion.

In the area of the face or neck, an infection should not be permitted to culminate of its own accord as this results in pitting of the tissues and a disfiguring scar.

Method of Incision

Incision should always be made at a point of the greatest fluctuation, pain, or induration. The incision should be carried in a direction parallel to the underlying vessels and tissues. This is a fundamental surgical principal to be observed, unless there is a good reason to vary it. The primary incision should always be of sufficient depth and length not to require repetition. To extend the area for drainage, a closed hemostat of suitable size is inserted into the cut as deeply as desired, then withdrawn with the blades open. This will adequately expose the infected area for drainage. The cavity may then be packed with a strip of ½ to 2-inch width sterile rubber dam, plain or iodoform gauze to maintain proper drainage.

Summary

(1) The spaces of the neck are frequently invaded by infections of dental or oral origin.

(2) Neglect or improper treatment of these infections have resulted in grave sequelae, due to the continuity of infective processes into the deeper structures of the neck, down into the mediastinum, or upward causing a venous thrombosis of the cranial sinuses.

(3) A thorough knowledge of the landmarks and anatomic relationships of the superficial and deep structures is essential for proper surgical intervention.

(4) Incisions must be performed according to recognized fundamental surgical principals avoiding undue trauma to vital structures, and proper drainage must be established.

2119 *Spruce Street*

A New Approach To Full Crown Preparation

(*Continued from page* 260)

the gingival margin and the shoulder removed with tapered stones as the preparation is carried below the gingiva. The shoulder preparation, however, allows for the proper thickness of the finished crown without impinging on the gingival tissue. All shoulders should be beveled to allow for an apron in gold.

Taking Impression — Since the shoulder produced with this technique is of varying width, it is important to have an excellent impression to facilitate the differentiation of the shoulder or gingival tissue:

(1) A copper band, larger than the size required, is annealed, the gingival border is festooned, and the occlusal surface is flattened to produce a flat shelf for the thumb to rest on when seating the band and a fingernail grip when removing it (Fig. 16).

(2) The band is placed on the tooth and held in place with slight thumb pressure.

(3) A Griffen Pin Setting Plier, or a similar instrument, is used to pinch the buccal or lingual surface at the gingival margin, to produce a form fitting, well-adapted band (Fig. 17). The pinch is then flattened and the impression can be taken.

Comment

The technique just described utilizes ultra high speed with a low motor R.P.M. For example, the use of a size 10-millimeter hollow stone with a motor operating at 6,000 R.P.M. would produce an actual cutting speed of about 180,000 R.P.M. As with any high speed technique sufficient water as a coolant must be used.

2211 *Church Avenue*

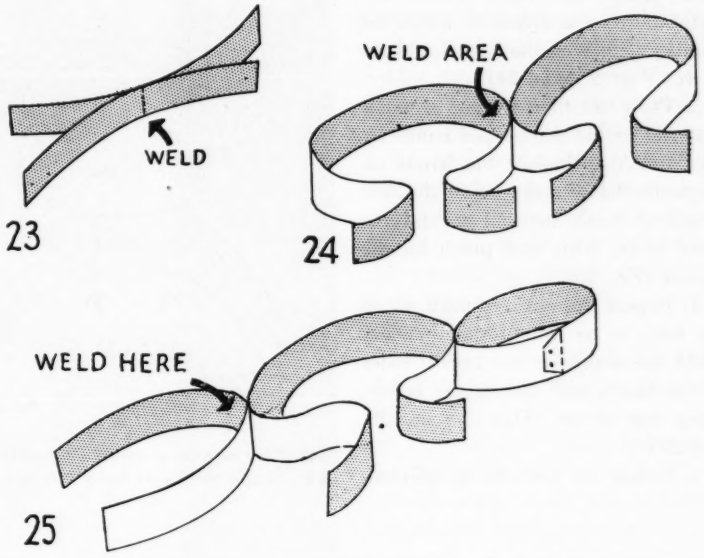
Temporary Splinting

in PERIODONTAL THERAPY – Part Two

FRANK J. FIASCHETTI, D.D.S.,
Binghamton, New York

DIGEST

In this installment which is the second of a two-part article, the author continues his survey of temporary splinting as an adjunct to periodontal therapy and as an aid to the general practitioner as well as to the periodontist. Step-by-step directions are given for the important methods of constructing temporary splints, and in each case the indications for use are given, and the advantages and disadvantages are outlined.



23, 24 *and* **25.** *Welding of orthodonic bands are shown.*

Orthodontic Bands

This method of temporary splinting is ideal for posterior teeth but may be used anywhere in the dental arch. Usually, orthodontic band splints are used for splinting from three to six teeth although they may be used for splinting greater numbers of teeth.[1]

Materials—The following materials are required:

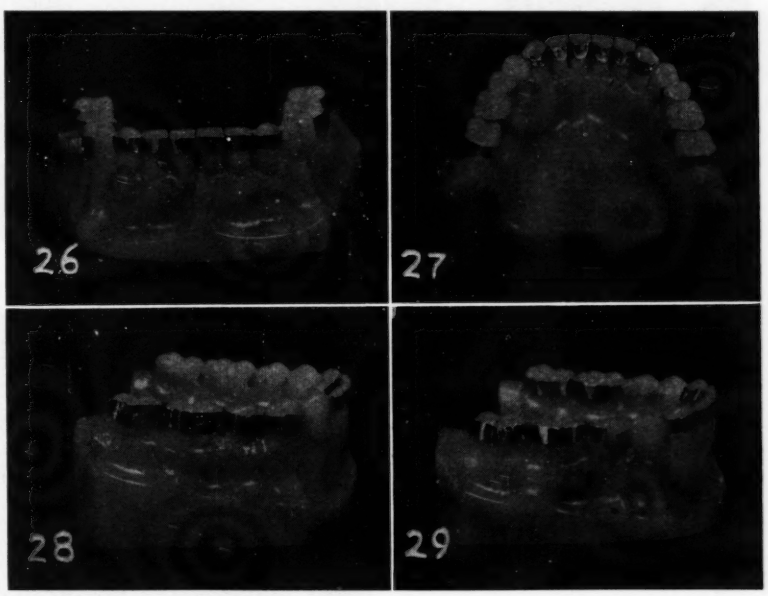
1. Anterior orthodontic band material
2. Posterior band material
3. Zinc cement

Equipment — A spot welder and band-forming pliers will be needed.

Procedure — Orthodontic bands may be made directly in the mouth or on a stone model. The procedures are much the same as those described for other types of splints except for the chair time involved. The following steps are taken:

1. Check the involved tooth contact

[1]Goldman, H. M.; Schluger, S.; and Fox, L.; Periodontal Therapy. St. Louis, C. V. Mosby Co., 1956, pp. 367-386.



26. *Orthodontic bands on lower arch. Finished and in preparation.*
27. *Orthodontic bands on lower arch, lingual view. Finished and in preparation.*
28 *and* **29.** *Orthodontic splints in position.*

points, tooth contour, and the alinement of the teeth to be splinted. Make certain that there is sufficient room between contact points to insert two thicknesses of band material.

2. Weld two lengths of band material together (anterior or posterior, depending on the teeth involved). Place the welded section between two teeth. Adapt the bands around the teeth and trim as required. Pinch the bands together on the buccal and remove (Figs. 23, and 24).

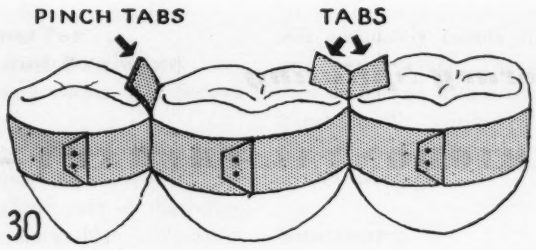
3. Place another length of band material on the two shaped bands by spot welding. Replace the bands on the teeth. Adapt and contour the new length of band material around the third tooth, trim, and pinch on the buccal (Fig. 25).

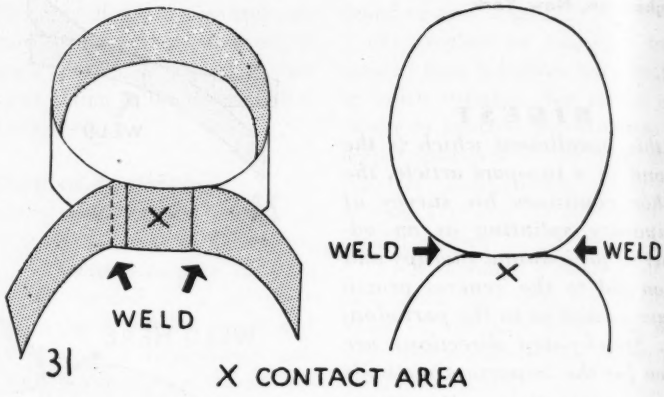
4. Repeat this process until all of the teeth to be splinted are banded. Weld the seams on the buccal sides of the bands and smooth the bands, using fine stones (Figs. 26, 27, 28, and 29).

5. Isolate the teeth to be splinted, using cotton rolls. Dry the teeth and cement the bands into place, making certain that they are as far to the gingival as they can go. After the cement is thoroughly dry, trim any excess.

6. Check the occlusion carefully and make any necesary adjustments.

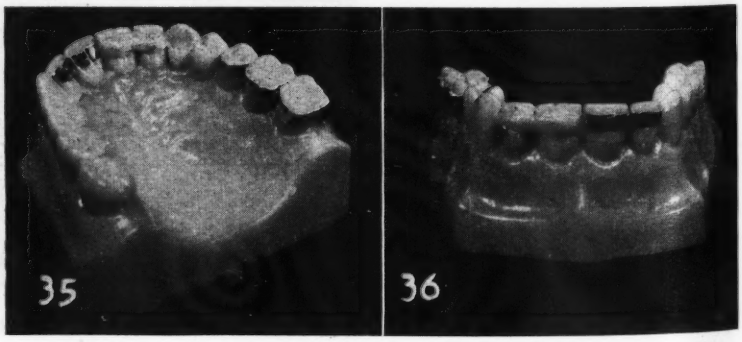
Alternate Method — A method of



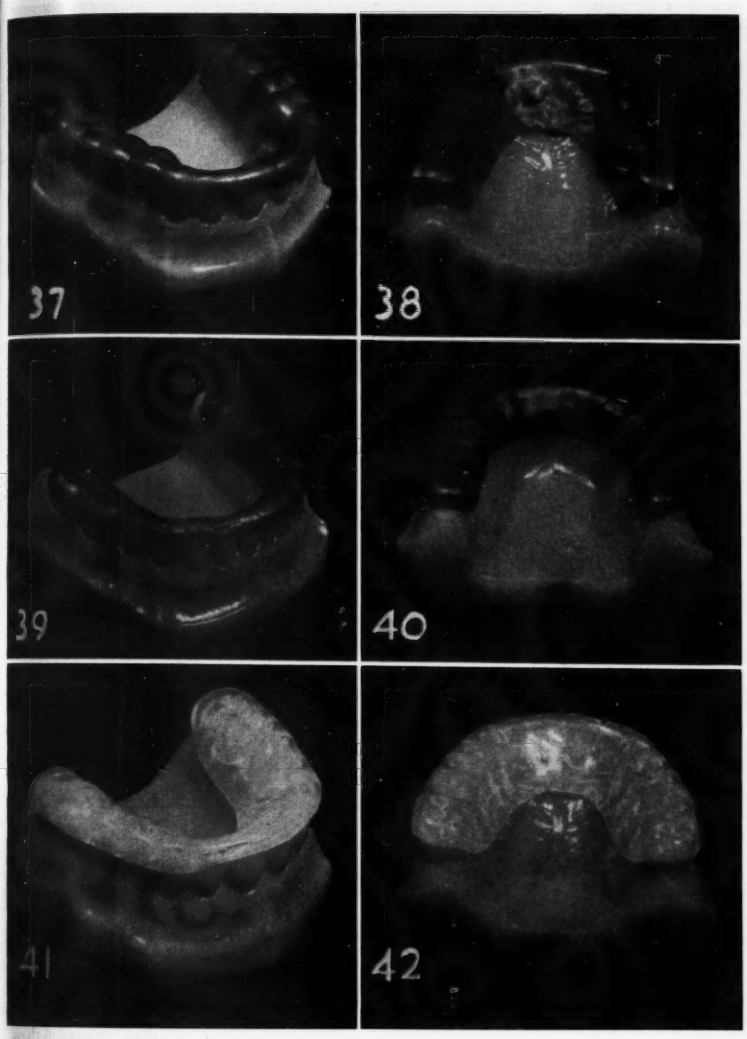


30. ***The tabs on orthodontic bands are shown.***
31. ***Single thickness band for tight contact areas.***

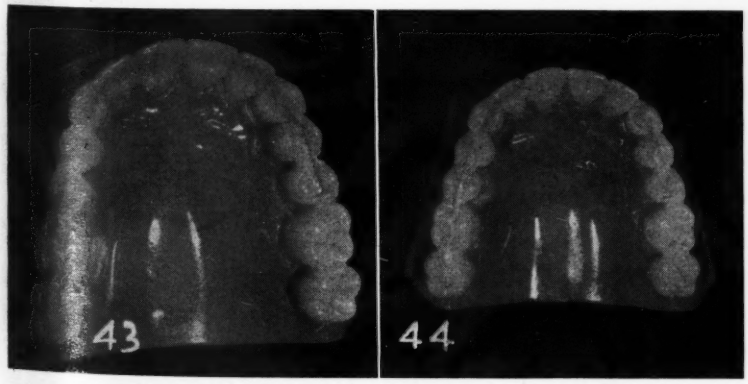
32, 33 ***and*** **34.** ***Orthodontic bands covered with resin, lower arch.***



35 ***and*** **36.** ***Orthodontic bands covered with resin, upper arch.***



37 *and* **38.** ***Acrylic biteguard wax-up, maxillary view.***
39 *and* **40.** ***Acrylic biteguard wax-up, mandibular view.***
41 *and* **42.** ***Finished biteguard, maxillary view.***



43 *and* **44.** ***Intradental plastic splint preparations.***

constructing an orthodontic band splint may be used in which the bands are made individually:

1. Each band is trimmed and contoured except for the contact areas where a tab is left extending above the occlusal surface.

2. After all of the bands are made and in place, these tabs are pinched together, the bands removed in one section, and the contact areas spot welded together. The tabs are now trimmed off and the splint is ready to cement into place (Fig. 30).

If a contact is extremely close and will only allow one thickness of band material to pass, make a complete band for one of the teeth in the usual manner and then weld two sections of band material to this band as illustrated in Figure 31.

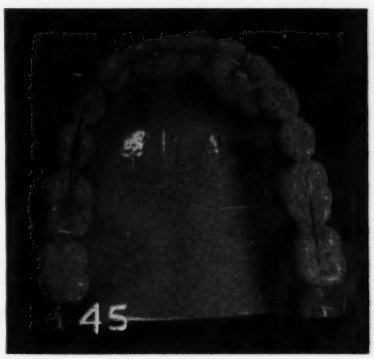
Advantages — Orthodontic bands are desirable for the following reasons:

1. Orthodontic band splints are firm and stable.

2. Properly made and cemented, orthodontic bands are easy to keep clean.

3. The actual fabrication of the splint may be left to a laboratory, thus reducing the chair time required.

Disadvantages—Esthetic results are poor. They may be improved by ap-



45. ***Wires in position in grooves.***

plying self-curing acrylic resin over the bands as described in the case of the wire ligature splint (Figs. 32, 33, 34, 35, and 36).

Acrylic Biteguard Splint

This type of splint is simple to fabricate and is an excellent temporary

splint where the entire arch requires splinting.[1]

Materials — Regular or self-curing acrylic, clear or pink, is used.

Procedure — The following steps are taken:

1. Take an impression of the arch to be splinted and pour a stone cast.

2. Wax the splint on the stone cast, using a double thickness of baseplate wax. Make certain not to engage any undercuts on the labial surfaces of the teeth by not covering more than one to one and one-half millimeters of the surface. On the lingual surfaces make certain that any undercuts are filled with modeling compound before waxing up (Figs. 37, 38, 39, and 40).

3. One of two procedures may now be followed: (A) the case may be sent to the laboratory for processing and the occlusion checked and adjusted in the patient's mouth, or (B) the waxed-up splint may be checked in the mouth and the occlusion adjusted in the wax before the case is processed. In either case, it is important to allow for freedom of mandibular movement in all excursions and to make certain that the splint is not so thick that it obliterates the freeway space (Figs. 41, and 42).

4. It is also possible to fabricate this type of splint directly on the stone cast using the "shaker bottle technique" with self-curing acrylic.

Advantages—This method has the following advantages:

1. The splint is inexpensive and simple to prepare.

2. It is effective in splinting action.

Disadvantages—The following objections may be encountered:

1. The splint may be too bulky for comfort.

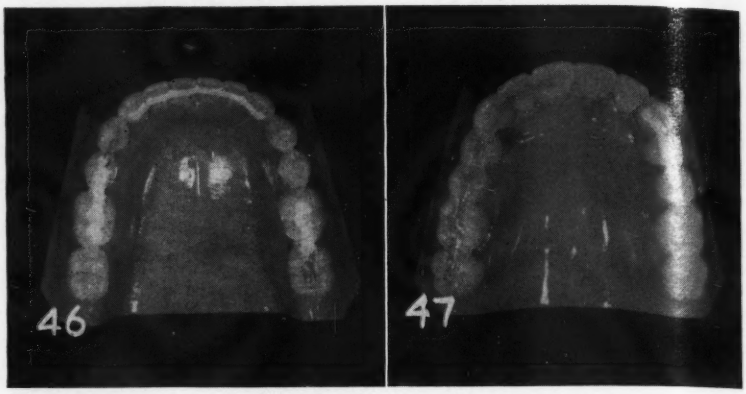
2. The patient may not wear the splint as it is removable.

Intradental Plastic Splint

This method of splinting is indicated where a more permanent type of splint is to be used later (full coverage). It may be used for both anterior and posterior teeth.[4]

Materials—Self-curing acrylic resin, and stainless steel wire .007 to .010 will be required.

[4]Nealon, F. H.: Acrylic Restorations: Operative Non-pressure Procedure, New York J. D. **22**:201 (May) 1956.



46. ***Resin placed in grooves.***
47. ***Resin trimmed and polished.***

48. ***Removable plastic splints, labial view.***
49. ***Removable plastic splints, lingual view.***

Procedure—Complete the following steps:

1. If the teeth are excessively mobile, ligate them, using silk ligature or dental floss in order to stabilize them temporarily.

2. Make a plaster or compound wall or core to stabilize the teeth during the operative procedures.

3. Prepare an undercut groove in the teeth involved, on the lingual of the anterior teeth or the occlusal of the posterior teeth (Figs. 43, and 44). The depth of the groove will vary according to the position of the pulp in the involved teeth. It may vary from one to two millimeters in depth and from two to four millimeters in width. These grooves may be started with diamond wheels and undercut with inverted cone burs or diamonds.

4. Isolate the involved teeth with cotton rolls, dry the teeth, place pieces of stainless steel wire in the prepared grooves and then pack the grooves with self-curing acrylic resin. Allow the core to remain in position until the resin has set (Figs. 45, 46, and 47).

5. After the resin has set, remove the core and trim any excess resin, using stones and burs.

6. Check the occlusion and make any necessary adjustments.

Advantages — This procedure has many advantages:

1. It is a quick and simple procedure requiring little chair time.

2. The splinted teeth will be firm and stable.

3. Permanent splinting can be evaluated without performing the complete operation.

4. The result is esthetically acceptable.

5. It is relatively easy to add teeth to the splint on either end.

Disadvantages—The following dis-

advantages are sometimes noted:

1. Sound tooth structure must be sacrificed in many instances.

2. It is sometimes difficult to stabilize the teeth during the groove preparation.

3. Acrylic resin is not a durable material to use on the occlusal surfaces of posterior teeth, hence, the resin may have to be replaced before the splint should be removed.

Removable Plastic Splints — This type of splint has largely replaced the removable cast metal splint as a temporary splint because of its better asthetic qualities and lower cost. Since this type of splint can be fabricated by the commercial dental laboratory, chair time and office laboratory time are minimized.[5]

Materials—Clear acrylic resin and 21-gauge stainless steel wire are used.

Procedure — The following steps are taken:

1. Take an impression of the arch to be splinted and pour a stone cast.

2. Using the stone cast, adapt a piece of 21-gauge stainless steel wire around the teeth to be splinted, placing the wire just above the widest portions of the teeth.

3. In the case of anterior splints, place the wire on the lingual surfaces of the teeth only and carry it around onto the distal half of the labial surfaces of the cuspids.

4. Remove the wire and place tinfoil on the model in the area where the splint is to be made.

5. Replace the wire on the model over the foil and wax the lingual and labial surfaces of the splint, leaving the wire bare where it passes between the teeth interproximally at each end of the splint.

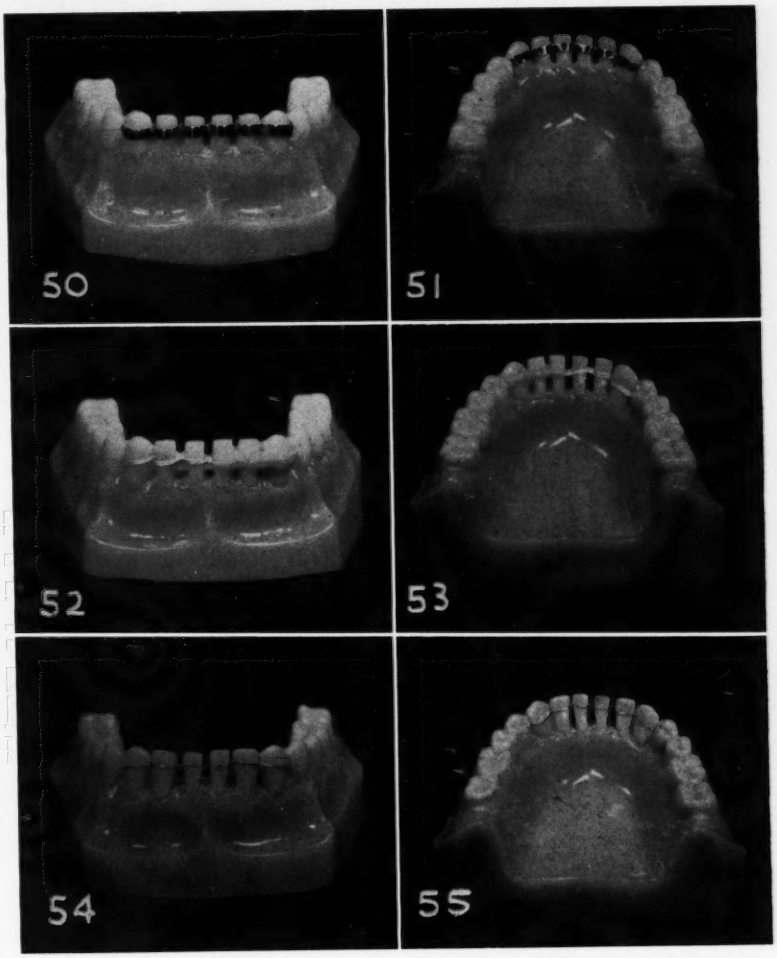
6. Place tinfoil over the wax-up and flask the case.

7. After the stone has set, boil out the wax, pack the case with clear acrylic, and process.

8. Polish the finished case and insert (Figs. 48, and 49).

9. Check the occlusion with the splint in place and make any necessary adjustments.

10. If the case is to be fabricated in the laboratory, it will only be necessary to take an impression, outline the splint, and send it to the laboratory for completion.



50 *and* **51.** *Orthodontic band splint on spaced anteriors.*
52 *and* **53.** *Silk ligature and resin splint on spaced anteriors.*
54 *and* **55.** *Wire ligature splint on spaced anteriors.*

Advantages—The removable plastic splint has the following advantages:

1. Little chair time is required to complete the procedure.

2. The procedure is inexpensive.

3. Since the splint is removable, it may be worn as a part-time splint.

Disadvantages — Possible objections to this type of splint are the following:

1. The patient may damage the splinted teeth during the insertion and removal of the case for cleaning.

2. The patient may not tolerate the splint because of bulkiness.

3. The splint must be removed for gingival massage and cleaning the teeth.

4. The patient may not adjust to the use of the splint at any time.

Special Case of Spaced Anteriors

Spaced anterior teeth present a special problem[1] which may be solved in the following ways:

1. A large single orthodontic band may be shaped and welded to surround all of the teeth to be splinted. This is held in place by passing a tie wire around the band in each interproximal space. Tighten the tie wire (.010, or .020) by twisting and then trim to two or three millimeters

[5]Simring, M., and Thaller, J. L.: Temporary Splinting for Multiple Mobile Teeth, JADA 53:429 (Oct.) 1956.

and tuck interproximally (Figs. 50, and 51). Check the occlusion and make any necessary adjustments.

2. Silk ligature may be used. Start by tying the ligature around the end tooth. Fill in the interproximal space by tying repeated knots. Loop the ligature around the next tooth, and repeat the knots until all of the teeth to be included in the splint are ligated. Apply the self-curing acrylic resin and allow to dry (Figs. 52, and 53). Check the occlusion and make any necessary adjustments.

3. Wire ligature may be used but it is more difficult to manipulate. Loop the wire about the end tooth and then twist it until the entire interproximal space is filled, loop it around the next tooth and continue to twist, filling in the interproximal space until the splint is complete (Figs. 54, and 55). Check the occlusion and make any necessary adjustments. The esthetic appearance of this splint may be improved by covering the wire with self-curing acrylic.

Summary

The indications for temporary splinting in periodontal therapy have been presented. Each major method of temporary splinting has been covered in a detailed step-by-step manner and thoroughly illustrated.

In general, wire or silk ligature covered with acrylic is most desirable for anterior teeth, while the use of orthodontic bands is most desirable for posterior teeth.

The use of temporary splinting as an adjunct to periodontal therapy is an invaluable aid to the general practitioner as well as the periodontist.

81 *Front Street*

The Courage to Live

FELIX DEUTSCH, M.D.

EVERY person has his own way of coming to terms with his innate fear of disintegration, of his self-destructive instincts; accordingly he wants to know whether this fear is perhaps about to become a material one. Moreover, any person bears within him fantasies of the infantile past in which he wished and feared their fulfillment, being afraid because these fantasies contain also the threat of destruction and death. Those fears of the past give the term "cancer" the meaning of a pitiless, destroying enemy, in the face of whom one may feel doomed. Other conflict-bringing thoughts inseparable from those mentioned above are such ideas as the right, the duty, the courage, the fear to live.

Threat of Disintegration

Being born into this world, having received life—although not having asked for it, not having been able to refuse it—instills into us the idea of a wholeness and the need of keeping it intact, and consequently the urge, the inner command to live. This idea leads to the instinctual drive for preservation of this wholeness and to the resistive power against self-destruction, because life is continually threatened by the danger of disintegration and decay, which in fact takes place partly all the time.

Danger from Within

The instinct of self-preservation is intimately connected with this perpetual threat against the wholeness. The wish to live is abandomed when the danger of disintegration can no longer be met. Therefore the courage to live depends on how much a person can rely on and trust his means of overcoming and warding off the inner danger of the self-destructive, life-undermining tendencies. The courage to live collapses when confidence in one's wholeness is threatened on too many fronts at the same time, from within and from without, and, if still weakened from former threats, one cannot resist when a new one breaks in.

Instilled Certainty Strengthens Ego

Uncertainty about a reality danger from within feeds on the unconscious. But certainty, forced untimely on a sick person, drives the unconscious deeper underground. Only timely instilled certainty starves the unconscious and strengthens the ego to face reality.

Adapted from *Psychosomatic Medicine* **18**:283 (July-August) 1956.

ANNOUNCEMENT OF BOOKS RECEIVED

PARTIAL DENTURES, By Kenneth P. Austin, D.D.S., and Ernest F. Lidge, Jr., D.D.S., B.S., St. Louis, The C. V. Mosby Company, 1957.

DIE LACHGAS-ANALGESIE IN DER ZAHNÄRZTLICHEN PRAXIS, by P. Vonow, D.M.D., Bern, Switzerland, Verlag Hans Huber, 1957. Price $6.50.

CLINICAL ORTHODONTICS, by Bercu Fischer, D.D.S., Philadelphia, W. B. Saunders Company, 1957.

DENTAL CLINICS OF NORTH AMERICA, Emergencies in Dental Practice, By James R. Cameron, D.D.S., Philadelphia, W. B. Saunders Company, 1957.

DENTAL CLINICS OF NORTH AMERICA: Tumors of the Oral Regions; Modern Practice in Endodontics, By Hamilton B. G. Robinson, D.D.S., M.S., and Robert G. Kesel, D.D.S., M.S., Philadelphia, W. B. Saunders Company, 1957.

INTERVIEWING, COUNSELING AND MANAGING DENTAL PATIENTS, by S. Joseph Bregstein, D.D.S., New York, Prentice-Hall, Inc., 1957. Price $7.50.

A MANUAL OF DENTAL ANESTHESIA, by W. Harry Archer, B.S., M.A., D.D.S., ed. 2, Philadelphia, W. B. Saunders Company, 1958.

A TEXTBOOK OF DENTAL ANATOMY AND PHYSIOLOGY, by Russell C. Wheeler, D.D.S., ed. 3, Philadelphia, W. B. Saunders Company, 1958.

The EDITOR'S Page

BLEEDING following any trauma, accidental or surgical, is a normal event. The homeostatic and the hemostatic mechanisms of blood clotting may be expected to control bleeding from most simple wounds. The extraction of teeth may be classified among the wounds where normal clotting may be expected. The ligation of blood vessels and the use of coagulants are seldom required to control hemorrhage from tooth sockets.

There are conditions where the clotting mechanism is deficient, and other conditions where the person is being treated with anticoagulants to prevent intravascular thrombosis, in which some form of additional hemostasis may be necessary to control bleeding after extraction. One of the more popular agents for such control is an absorbable compound, modified carboxymethylcellulose (Surgicel®). This product is available in "cones" that are placed in the alveolus immediately after the delivery of the tooth.

Morris and Ping of the Indiana University, School of Dentistry, conducted animal and clinical studies to determine the effectiveness of these cones.[1]

"A 24-hour observation of these patients revealed no symptoms, the areas looked satisfactory and the cones could not be recognized, although there was a yellowish-brown residue present. Subsequent 10-day follow-ups were uneventful.

"The cases exhibited a difference in the time required for clot formation in the various sockets. Blood in those sockets containing a cone required an average of 1.428 minutes for complete coagulation; while blood in the sockets without a cone required an average of 3.428 minutes for complete coagulation. The cones appeared to have more effect on cases of prolonged bleeding. The subsequent 30-day examinations on these patients revealed uneventful progress. There was no secondary hemorrhage, and the healing was comparable to that in the sockets without cone therapy."

These absorbable hemostatic cones have both a biochemical and a mechanical effect:

1) "A capacity to react with the hemoglobin in blood to form a gelatinous coagulum which blocks ruptured vessels.

2) "The material swells upon contact with blood so that a slight pressure is exerted against the walls of the tooth socket. The material is completely absorbable and does not interfere with the normal organization of the blood clot."

The authors state that the cone may be used in all exodontic and oral surgical procedures *except where there is an inadequate amount of blood in the socket.* Nor should the cone be used in large cystic cavities or in the presence of an acute infection.

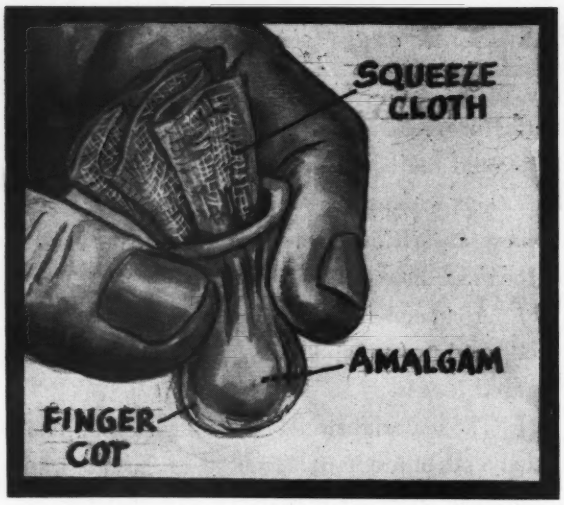
No postoperative complications, no side effects were observed. "There are no known medical conditions that would contraindicate its use."

In the present day, when so many people are under anticoagulant therapy for the various conditions in which intravascular clotting is a hazard to the coronary and cerebral circulation, the use of the hemostatic dental cone is particularly applicable. Among the young, the old, and the in-between any simple and safe method of reducing the annoyance and the apprehension that stem from postoperative dental bleeding is a procedure that should be routine.

Morris and Ping also observed that there was a complete absence of "dry sockets" among the 153 patients that were treated with the hemostatic cone. Anything that will prevent this painful condition is a surgical accomplishment.

---

[1]Morris, Estell E., and Ping, Ronald S.: A New Sterile Absorbable Hemostatic Dental Cone, J. Indiana D.A. **37**:10 (March) 1958.



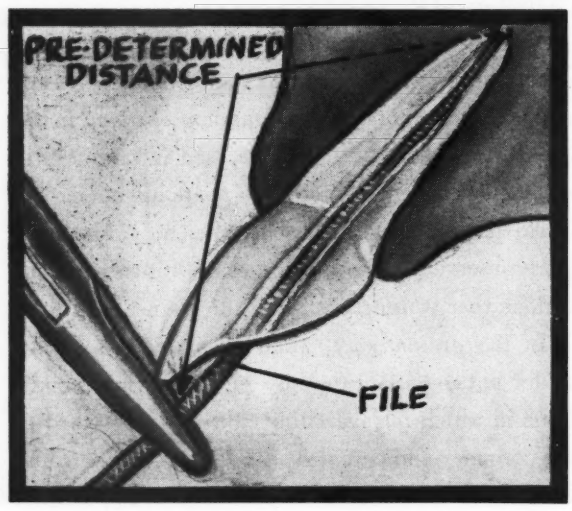
1

Clinical and Laborato

Prevention of Finger Staining

I. B. Hyams, D.D.S., Montreal

1. After the amalgam is mixed and placed in a squeeze cloth the mix is put in a rubber finger cot. When the excess mercury is expressed from the mix it is caught in the rubber cot and does not touch the fingers.

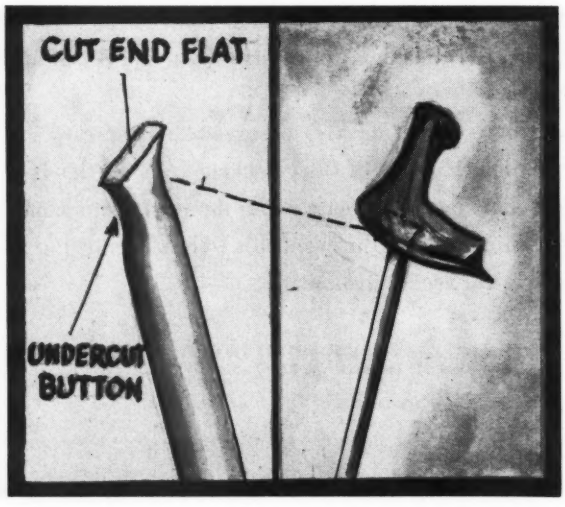


2

Endodontic Technique

James A. Sconzo, D.M.D., Brooklyn, New York

2. After the length of the root canal has been determined, the file or reamer is grasped in a straight hemostat. The hemostat acts as a "handle" and as a "stop" to prevent penetration into the periapical space.



3

Sprueing of Wax Pattern

Douglas L. Roberts, D.D.S., West Orange, New Jersey

3. Cut the end of a German silver sprue to form an undercut button. When the sprue is sunk into the pattern, mechanical retention is obtained. Less heat is required because of the reduced bulk of the sprue.

READERS *are Urged to Collect $10.00*

For every practical clinical or laboratory suggestion that is usable, DENTAL DIGEST will pay $10 on publication.

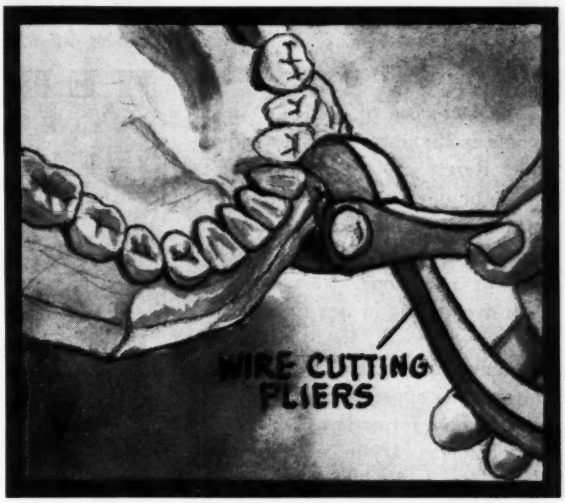
You do not have to write an article. Furnish us with rough drawings or sketches, from which we will make suitable illustrations; write a brief description of the

SUGGESTIONS . . .

Trimming Models

Harold R. Karlin, D.D.S., Jamaica, New York

4. An ordinary wire-cutting pliers is a suitable tool to use to trim excess from stone or plaster models.



4

A Quick Sedative Base

Howard M. Schiff, D.D.S., Astoria, L. I., New York

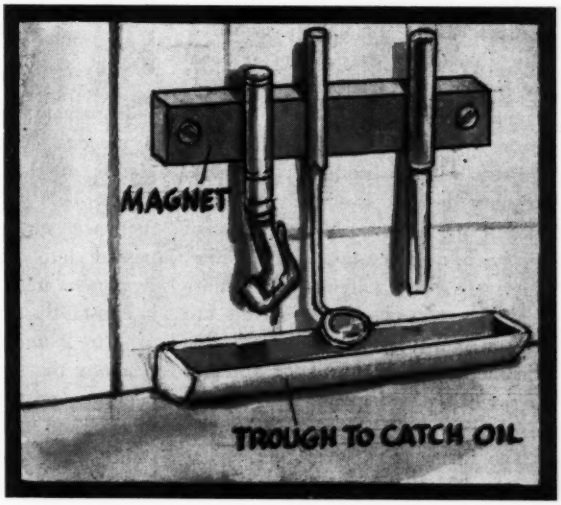
5. A few crystals of zinc acetate added to a zinc oxide-eugenol mix will speed the setting time.

5

Storage of Handpieces

M. D. Adler, D.M.D., M.D., Hull, England

6. A magnet that is used to hold kitchen knives may be used to hold handpieces and other metal-handled instruments.



6

technique involved; and jot down the advantages of the technique. This shouldn't take ten minutes of your time.

Send your ideas to Clinical and Laboratory Suggestions Editor, DENTAL DIGEST, 708 Church Street, Evanston, Illinois.

Malignant Melanoma

The incidence of malignant melanomas is highest in the seventh decade. Rarely are the growths noted before or during puberty. Males and females are equally affected. Most patients have had preexisting nevi at sites of melanoma. Nevi range in color from light brown to jet black. They are smooth, flat, and usually less than 0.5 centimeters in diameter. Hairy moles apparently are not prone to melanoma formation.

Melanomas vary in color from reddish brown to jet black and may occur on any part of the body. The tumor spreads primarily through the lymphatics.

The primary growth is removed with a wide, sharp excision. Electrocautery may be employed if wide removal is not comprised and the tumor remains satisfactory for histologic examination. Regional lymph nodes are dissected if the primary tumor is favorably located. A lesion of the midback or midabdomen is in an unfavorable location in respect to node dissection, whereas axillary, upper pectoral, or inguinal growths are better suited.

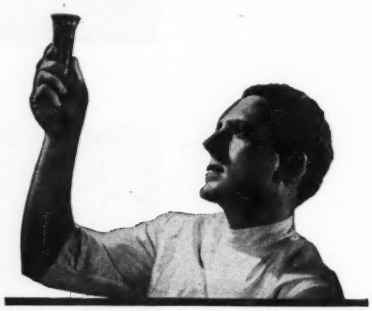
The degree of metastatic involvement is also an important consideration. If the metastases to regional nodes are extensive, dissection is apparently valueless. Prophylactic dissection probably should be limited to nodes that are not involved.

Since melanomas are extremely radioresistant, irradiation is valueless. Inadequate excision or removal by freezing, electroneedles or caustic agents may seriously jeopardize prognosis. Prognosis is most favorable for patients with no nodal involvement, primary lesions less than 2 centimeters in diameter and lesions of the head, neck, or upper extremities. Survival rates of patients with tumors limited to the superficial dermis are higher than those with deep growths. Pleomorphism of the tumor and age or sex of the patient are unrelated to prognosis.

The five-year survival rate of patients with malignant melanomas is about 26 per cent. Wide local excision of the primary tumor is indicated in almost every case. Regional node dissection is performed only when nodal involvement is suspected.

Mund, Robert, and Ihnen, Menhard: Malignant Melanoma, Surgery **38**:652-659 (*December*) 1955.

MEDICINE *and the Biologic Sciences*



Postnasal Drip

In persons without nasal disorders, a mucous fluid is secreted by the glands of the nasal mucous membrane. This secretion is swept over the nasal surfaces by ciliary action, passed into the nasopharynx and swallowed unconsciously. The mucus is constantly renewed in the amount of 1 to 2 quarts daily. The amount reaching the nasopharynx varies, depending on the environmental humidity and the amount being constantly evaporated.

The secretory process is entirely controlled by the automatic nervous system. Any of a number of factors disturbing autonomic function will affect the amount as well as physical and chemical characteristics of the mucus secreted. A postnasal drip may result from derangement of the amount, rate of secretion, viscosity, chemical composition of mucus, or structural deviation of flow.

Atmospheric conditions are important in altering nasal physiology. Postnasal drip occurs more commonly during winter than during summer and may be related to overheated and underhumidified offices and homes. Increased viscosity is the most common basis of postnasal drip and results from relative increase in the mucinous content of nasal secretion because of dryness of air.

Although stimulants and irritants such as smoke, dust, and fumes may cause increased secretion, viscosity is not usually increased. Therefore, such factors are not frequent causes of postnasal drip. Tobacco and alcohol are probably never directly responsible for nasal symptoms.

Emotional factors may be of some importance in postnasal drip. Vasomotor instability may easily result in nasal dysfunction. Endocrine, metabolic, and dietary factors also may influence the amount and quality of nasal secretions.

Although sinusitis may produce purulent discharge and nasal allergy may cause profuse and watery discharge, such conditions do not usually cause postnasal drip. Various structural abnormalities are frequently described as causes of postnasal drip. When septal deviation is slight, expert judgment is necessary to determine whether the abnormality is responsible for symptoms and whether it will require operation.

Turbinal hypertrophy is more likely to produce symptoms of nasal obstruction than postnasal drip. Edematous enlargement of the posterior turbinal tip is noted without discharge and, therefore, is not an essential etiologic factor. Lymphoid hyperplasia sometimes gives rise to sensations similar to those of postnasal drip. Postoperative scar tissue, medical cysts, and chronic irritation of

the mucosa of the pharyngeal vault may be associated with mucoid discharge and at times cause postnasal drip.

Richards, Lyman G.: The Problem of Postnasal Drip, Ann. Otol., Rhin. & Laryng. **64**:55-68 (*August*) 1955.

Fungous Infections of the Feet

Acute fungous infections of the feet such as tinea pedis, athlete's foot, ringworm of the feet, and epidermophytosis are commonly believed to be freshly acquired infections. Such infections are contracted directly from infected persons or indirectly from contaminated objects. Frequent sources of fungous infections are shower rooms, swimming pools, carpets, slippers, and towels. Evidence to support this theory, however, is weak.

A group of patients free of fungous disease of the feet was exposed to masses of pathogenic fungi of foot baths. Although cultures of 60 per cent of the subjects became positive after exposure to the heavily contaminated foot baths, no trace of active disease was observed within six weeks after exposure. Fungi were readily transmitted from the exposed to the unexposed foot in most instances.

Exogenous exposure is of slight or negligible importance in initiating acute attacks of fungous disease of the feet. Active disease is principally due to lowered resistance of the skin of the human host of fungi that were previously latent. Attempts to sterilize suspected contaminants or to impregnate articles with fungicidal agents are useless. In fact, some chemicals used for this purpose may cause primary or allergic irritation of the skin and thereby lower resistance and allow activation of disease. Unhygienic and stagnant public foot baths should be abolished.

Some measures help to maintain or raise resistance of skin to fungous invasion. Perforated shoes reduced the tendency toward accumulation of excess moisture and maceration. Moisture absorbing socks of wool or cotton should be worn in preference to those made of plastic textiles such as nylon or rayon.

Regular use of a fungistatic foot powder and insertion of lamb's wool in the toe webs of persons with interdigital maceration are also of value. Finally, careful foot hygiene and use of nonalkaline, soapless detergents for washing the feet are protective measures.

Baer, Rudolf L.: Newer Studies on the Epidemiology of Fungous Infections of the Feet, Am. J. Pub. Health **45**:478-790 (*April*) 1955.

Strabismus—Psychiatric Aspects

Strabismus is a disorder of the eyes in which optic axis cannot be directed to the same object, due to a lack of muscular coordination. Much importance has been attached to the ridicule that a child who has a marked misalinement of his eyes will almost certainly have to suffer from his schoolmates.

The strabismic child is also exposed to extra attention on this account from the grown-ups. He soon learns to shy away from the poorly concealed stares of adult visitors. He does not enjoy being the center of conversation relative to his defect.

All too frequently the treatment for this stigma is entirely expectant. It is now quite rare that parents can say expectant neglect was on the advice of the family physician.

Several children out of every hundred have strabismus. Usually the defect includes three major liabilities: (1) inferior vision in one of the eyes (the crossed one), (2) cosmetic lack of straightness of the eyes, and (3) incapability of achieving the highest levels of muscular function that only binocular vision can bring, such as perfect depth perception. To the squinter, the cosmetic factor is the most frequent or important. It is the only facet of strabismus that is likely to have any effect upon the personality.

Strabismus is a cosmetic shortcoming whose concealment is not ordinarily feasible except by surgical correction. If severe enough, it subjects its possessor to a varying degree of isolation from the surrounding elements of society, beginning in kindergarten and continuing indefinitely. Feelings of exclusion from normality are early engendered. It is not surprising that a sensation of inferiority may develop. In virtually every case, strabismus leaves some imprint upon the personality, though not always a profound one.

The indicated treatment is prevention because it may prove exceedingly complex to withdraw the undesirable personality adjustments resulting from a life-long strabismus. This means treatment during childhood, the earlier the better. Unfortunately, most squinting children today receive treatment (if they receive any at all) at what might be termed a "worst possible time" between the ages of 6 and 12. Usually treatment begins too late to achieve a real functional cure —the true binocularity that is the only good guarantee of life-long parallelism of the eyes.

The early school years are not entirely an ideal time for cosmetic surgery. Surgery at these ages does not have as lasting an effect in maintaining alinement as surgery in adult life. Although surgery may be too early for lasting cosmetic results, it must be done anyway because proper alinement of the eyes is important to achieve personality development.

Strabismic adults most clearly evaluate the cosmetic blemish of strabismus as far outweighing in importance the deficit in function. It is exceedingly rare that any functional improvement can be made in strabismus once maturity has been reached. On the other hand, it is equally rare to find a case in which some cosmetic improvement cannot assuredly be made. Psychiatric considerations alone are sufficient for corrective surgery in adults.

Regnier, Edme: Psychiatric Aspects of Adult Strabismus, Gen. Practitioner **14**:123-129 (*October*) 1956.

Senility

The change from normal senescence to senility may occur in any decade after the fifth. The onset may be abrupt or gradual and almost imperceptible.

The symptoms resemble manifestations of a psychosomatic disorder. The early features are dislike of change, constriction of activity and interests, difficulty in comprehension, inefficiency in performance of familiar duties, and a tendency to reminisce and repeat.

Brain activity and life and death of cortical neurons are determined by the transport of oxygen and carbohydrate to the brain cells and utilization in the cell. The exact relationship of the process to mental deterioration is unknown.

Decreased cerebral blood flow with a concomitant decrease in brain metabolism is noted with arteriosclerotic dementia and senile dementia. The causative factors may be hypertension, arteriosclerosis, and thrombosis. Although utilization of glucose decreases with age, fructose utilization is only slightly affected and may be used to supply the carbohydrate needs of the brain cells in the aged.

Longevity is a family trait. The age of onset of senile dementia is frequently the same in several generations of the same family. Capacity for survival in the form of physical and psychologic characteristics, rather than vulnerability to deteriorations, may be the most important hereditary factor. Studies of how to strengthen and broaden qualities of survival may prolong useful life.

Senile deterioration does not depend on age. A gradual loss of flexibility and learning power occurs as people grow older. The changes of dementia, however, are selective; some qualities are maintained in good order while others deteriorate. Organic and psychologic tests may reveal early senile impairment.

Depressive, toxic, and schizophrenic reactions in the aged can be treated with success. Among elderly patients who have nervous breakdowns, recovery and survival rates are twice as good when the disorder is a schizoaffective state as when an organic lesion is diagnosed. Since neurosis or psychosis in an old person may be a defense against dementia, the removal of a depressive reaction by electro-shock may be unwise.

Psychologic and social therapy may reverse apparently hopeless senile deterioration, but the separation from familiar surroundings required by hospitalization may be a threat to survival. Disintegration of family life contributes to feelings of loneliness, not being wanted, and uselessness. These are all important factors in senile psychosis. Rigid retirement policies and lack of preparation for life after retirement add to the stress of aging. Inadequate treatment of physical diseases and improper housing promote senility.

Group therapy, old age clubs, and community activities may provide social needs. Elderly people have much the same desires and reactions as younger people. Ability to fall in love and want marriage is common among people over 70 years of age and 50 per cent of elderly people retain sexual desire. Religious feelings do not increase with age and dogmatism decreases.

Wilson, David C.: The Pathology of Senility, Am. J. Psychiat. **3**:902-906 (*July*) 1955.

Contra-Angles

Tranquilizers: Liquid, Solid, and Mental

A dear old uncle once told me that he took a wee nip of whiskey because: "I hate the stuff, but it is good for my kidneys." He must have been correct, for he continued to make a living as a cattle buyer for years after he had lost the use of his legs as a result of an accident. In all sorts of weather he drove around the countryside in his one-horse and buggy buying cattle from farmers. In winter his "kidney complaint" was about the same as in the other three seasons: quite acute and requiring constant treatment from a bottle that he kept hidden in the barn in winter and under a wild rosebush in summer. He worked hard and honestly, lived long, and never appeared to be drunk or disorderly.

Other rationalizers have taken their nips to ward off snake bite, improve the symptoms of the common cold, and recently have discovered that whiskey is salutory for the coronary circulation.

Years ago a couple of friends of mine from Chicago and I took a fishing trip in the Missouri Ozarks with some St. Louis colleagues (Leo Shanley, Lloyd Wright, Edgar Keyes, and Bob Johnson). The river country and the brush of the Ozark hills was well populated with water moccasins. Our St. Louis hosts supplied us well with "antivenom." The Red Cross First Aid *Manual* thinks naught of this particular precaution and first-aid measure, but we enjoyed the treatment immensely.

The "coronary dilators" have collected a body of good enough evidence that suggests a nip or two at the end of the day is a marvelous therapeutic agent. To be sure, we all know people who have depended too much on the treatment and were not careful of the dosage. They died of cirrhosis of the liver or in uremia.

The fervent advocates of the place of whiskey in treating the common cold have until recently had a time collecting substantial evidence to support their wish-claim. Now they have the august authority of the American Medical Association *Archives of Otolaryngology* and the word of a highly regarded physician, Noah D. Fabricant.

(*Continued on page 279*)

A news release from the AMA gives this cheering word:

"Alcoholic beverages are helpful in fighting the common cold—at least in the early stages.

"This was reported by Doctor Noah D. Fabricant, Chicago otolaryngologist, in the March *Archives of Otolaryngology*, published by the American Medical Association.

"Doctor Fabricant said, 'Although consumption of alcohol is obviously not a cure for the common cold, its beneficial role in some persons can neither be minimized nor dismissed.'

"Alcohol has long been a popular remedy for warding off colds after chilling or exposure in inclement weather. It increases blood circulation, provides warmth and comfort, induces drowsiness, and promotes a desire to rest.

"According to Doctor Fabricant, 'Once acted upon, the decision to rest in bed can serve a most useful purpose. Rest in bed diminishes the severity of the common cold, limits its spread to others, and reduces the frequency of complications.'

"But alcohol is valuable in fighting a cold in still another way.

"A cold is preceded by a lowering of the temperature in the nasal passages and a constriction of blood vessels within the nose. The passages then become dry and the defense against the cold is weakened. This paves the way for acute infection, the physician said.

"The prime intent on discovering a cold in its early stages is to restore the nasal passage to its normal state. This can best be done by raising the temperature of the membranes.

"In the test conducted by Doctor Fabricant, it was found that the nasal temperature could be raised after the consumption of alcohol.

"Twelve persons, two with symptoms of a cold, were given one ounce of a blended whiskey. Temperatures were checked before the test began and again at 15-minute intervals following the taking of the alcohol.

"All twelve showed a nasal temperature rise within 30 minutes.

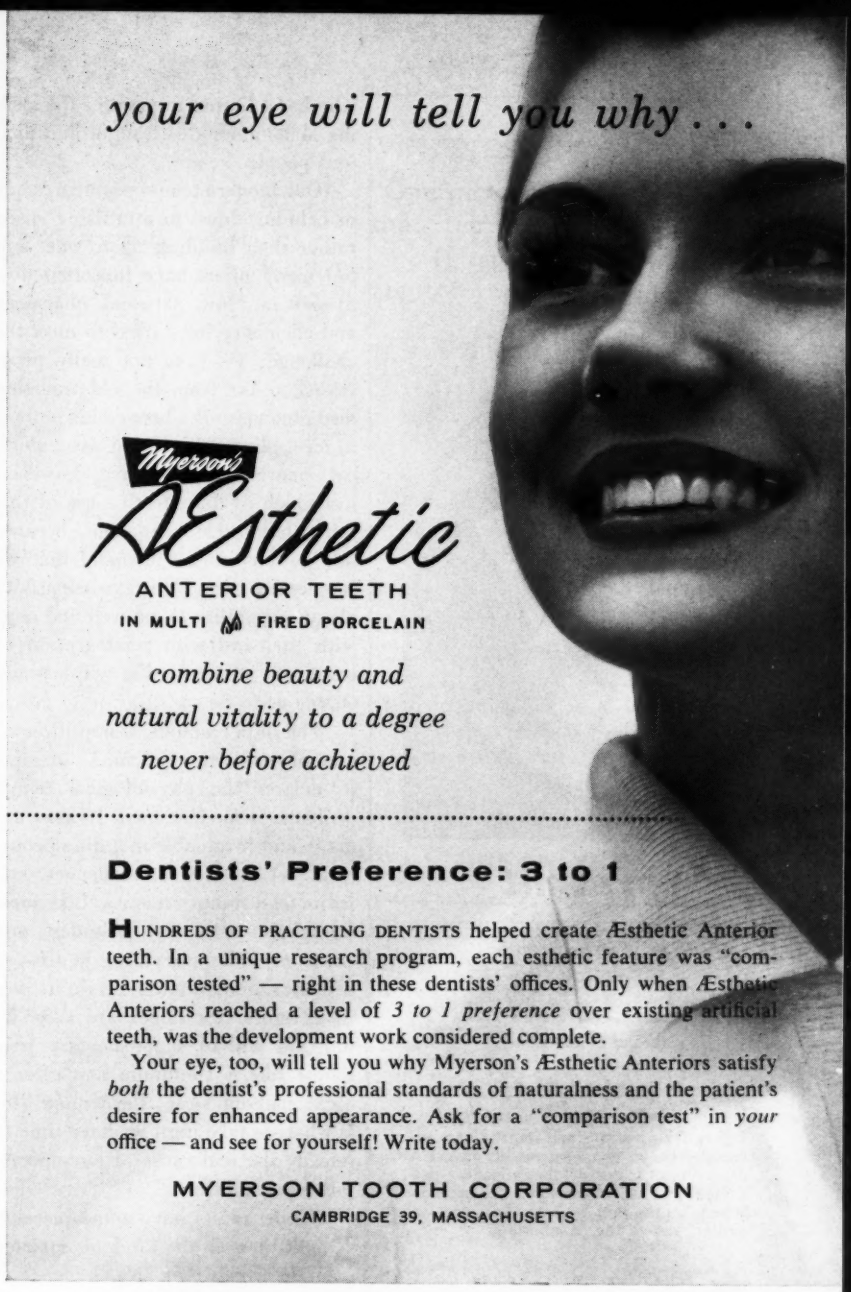
"According to Doctor Fabricant, the results indicate the physiologic usefulness of an alcoholic beverage during the very early stages of the common cold."

Alcohol has its limitations as a vasodilator and as a sedative. Taken in moderation it is a gift to mankind. Taken in excess it is a curse to the addict and to society. The tolerance varies among persons, as does the tolerance to any other drug, disease, or stressor.

Before any of us goes too far overboard in accepting any kind of crutch to support our ego and dilute our anxieties we should read the profound and mature editorial in the *Journal of the American Medical Association* (29 March, 1958) on "The Old-Fashioned Tranquilizer" by F. G. Ebaugh, M.D.

Here are excerpts from that editorial, but do not accept this condensed version. If you are not a subscriber to the *Journal of the American Medical Association* (as every dentist should be), borrow the 29 March copy from one of your physician friends. This editorial should be required reading for every one of us

(*Continued on page* 280)


your eye will tell you why . . .
Myerson's
Æsthetic
ANTERIOR TEETH
IN MULTI FIRED PORCELAIN
combine beauty and
natural vitality to a degree
never before achieved
Dentists' Preference: 3 to 1
HUNDREDS OF PRACTICING DENTISTS helped create Æsthetic Anterior teeth. In a unique research program, each esthetic feature was "comparison tested" — right in these dentists' offices. Only when Æsthetic Anteriors reached a level of 3 to 1 preference over existing artificial teeth, was the development work considered complete.
Your eye, too, will tell you why Myerson's Æsthetic Anteriors satisfy both the dentist's professional standards of naturalness and the patient's desire for enhanced appearance. Ask for a "comparison test" in your office — and see for yourself! Write today.
MYERSON TOOTH CORPORATION
CAMBRIDGE 39, MASSACHUSETTS

prevent gagging

XYLOCAINE®
(brand of lidocaine*)
VISCOUS

Before taking x-rays and impressions, administer one or two teaspoonfuls of XYLOCAINE VISCOUS; instruct the patient to swish it around in the mouth for a few seconds before swallowing. Allow 3-5 minutes waiting period after swallowing.

Astra Pharmaceutical Products, Inc.
Worcester 6, Mass., U. S. A.

* U. S. PATENT NO. 2,441,498

who has a license to practice the healing skills among distraught and anxious people.

"Our modern tempo problem is one of calming down to a cruising speed rather than building up to one, and too many of us have forgotten how to shift into low. As usual, pharmacy and chemistry have tried to meet the challenge; we have not really progressed so far from the old traveling medicine man who brewed his potions to meet physiological and psychological emergency. We have, however, lost much of the effectiveness of this fairly honorable gentleman, because our potions do not demand that we supplement them with reassuring faith about our ability to get well and cope with life, and with reintegration of emotional strengths that will actually enable us to do so . . .

"The now famous tranquilizer is one of modern medicine's attempts to answer the physiological tempo problem of modern man. Its uses are many and invaluable in aiding people to adjust to stresses, challenges, and major and minor traumas. Like most medicines, activities, attitudes, and emotions—like everything in life—it demands moderation to retain its positive values. Its values are those of first aid and of supplementary pain relief; like a 10-minute nap after a night without sleep, the tranquilizer is what we take until we have time to remedy the real cause of our uncomfortable condition . . .

"While adults have some measure of control over the kind of environment in which they live, none of us can live in a vacuum. We can change residence, jobs, and personal associations; we can suppress worries, avoid experiences that frighten us, retreat from a dull reality into fantasy once in a while, take a vacation, or buy a television set. Part of the time we can avoid tensions. However, each of us must still work at something, not only because no society can survive unless each member contributes, but also because, as members of the society, each of us has a built-in need to achieve something in order to retain our own self-esteem. Each of us must live somewhere and must make contact with certain other people in order to satisfy our basic needs for food, protection from the weather, and a multitude of other acquired needs of civilization. In addition, having progressed beyond the very primitive, each of us must have a role, a place to belong and fit into the scheme of the society of people. We must earn, by our behavior, some approval and acceptance from others, and, most of all, we must have respect for ourselves. These things, then, require that we cope actively and almost constantly, with an outer environment and that we learn how to do this without disintegrating inner anxiety . . .

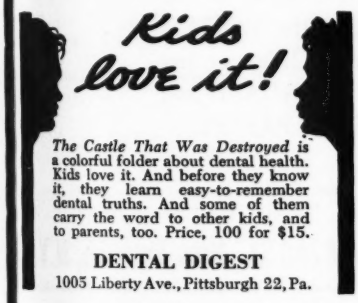
"Contrary to some popular ideas, normality, in my opinion, cannot be regarded as a state of nirvana in which one experiences no tension, no dissatisfaction, and therefore no drive to respond. These moments come rarely and briefly in a lifetime if at all. To live is to be under tension, to be dissatisfied; to be anxious, sometimes unbearably so; to be angry, sometimes potently and sometimes impotently; to be everlastingly hungry, to some degree, for things that may be consciously well defined or very vague; to become depressed and discouraged; to be physically or psychosomatically ill; to worry obsessively; and to become hysterically emotional. The range of normal functioning is wide and flexible. All of these reactions and many more can fall within it, provided they do not occur in intensity, frequency, duration, or quality that disorganizes ability to function with satisfaction in the environment. One bad day is different from a week of bad days, and both are exceedingly different in meaning from three consecutive months of them . . .

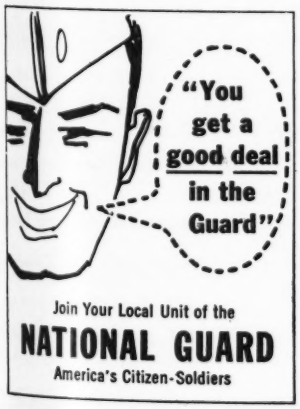
"Where then is real tranquility? He who achieves it must be a person who is not synthetically relieved of all the pressures of everyday living and who very much feels the minor and normal tensions, anxieties, depressions, and dissatisfactions. He will expect, accept, and perhaps even enjoy the jolts and insecurities in this business of living. He will gamble, and probably win, because he will

not expect to be rewarded by the calmness of inhabiting a vacuum. He will know when he feels angry, tired, happy, or blue, and it will not take him long to find out why. Sometimes he will show his feelings, partly, with control and appropriateness. He will want to solve his problems rather than avoid them, and he will actively seek those things he needs, rather than numbing away his dissatisfactions with a capsule or a tranquilizing pill. The supply of tranquilizers will be not in the bottle but inside himself."

It is refreshing to read in the official publication of American medicine a statement that supports the view that faith, and courage, and self-reliance still have first claim as the weapons that man should use to conquer himself. Tranquilizers and sedatives have a place in modern-day therapeutics. They are indicated in many emergencies and to reduce immediate tensions. Like alcohol, tranquilizers must be used in moderation. They are not substitutes for the potent therapy that can pour from the spirit of man.

—E. J. R.


Kids love it!
The Castle That Was Destroyed is a colorful folder about dental health. Kids love it. And before they know it, they learn easy-to-remember dental truths. And some of them carry the word to other kids, and to parents, too. Price, 100 for $15.
DENTAL DIGEST
1005 Liberty Ave., Pittsburgh 22, Pa.



Advertising Index

Achromycin-V 277

Astra Pharmaceutical Products, Inc. 247, 280

Austenal, Inc. 249

Benzodent 250

Betadine 284

Cavitron Co. 248

Columbia Dentoform Co. 281

Cook-Waite Laboratories, Inc. ..... Third Cover

Darvon 245

Dentists' Supply Co., The ..... Fourth Cover

Hotel Jefferson 283

Interstate Dental Co., Inc. 282

Laclede 250

Lederle Laboratories 277

Lilly & Co., Eli 245

Myerson Tooth Corp. 279

Oraline 283

Peter, Strong & Co., Inc. 250

Tailby-Nason Co., Inc. 284

Universal Dental Co. ..... Second Cover

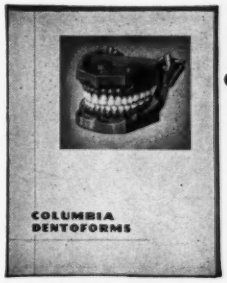
White Dental Mfg. Co., The S. S. 278, 283

Williams Gold Refining Co., Inc. 246

Young Dental Mfg. Co. 281

CHINESE PROVERB

"One picture is worth more than ten thousand words." . . . If true, then Columbia Dentoforms speak volumes.



If you do not have our Catalog No. 33, illustrating various Aids in Patient Education, write for your copy today.

COLUMBIA DENTOFORM CORP.
"The House of A Thousand Models"
Also Headquarters for Brown Precision Attachments
131 East 23rd Street
New York 10
OUR 41st YEAR

FREE TRIAL OFFER

Learn why thousands of dentists now use this soft, flexible rubber polisher. Cleans or polishes rapidly and efficiently, yet is so gentle, patients feel safe and comfortable. Spreads in use reaching under the free margin of the gums and most of the proximal surfaces.

Write today for free sample.

Young Dental Mfg. Co.
St. Louis 8, Mo.

BS POLISHERS

See second cover D.D.6

UNIVERSAL DENTAL CO.
48TH AT BROWN STS., PHILADELPHIA 39, PA.

Please send Univac information.

Dr. .....

Address .....

City .....

See page 246 D.D.6

WILLIAMS GOLD REFINING CO., INC.
2978 MAIN ST., BUFFALO, N. Y.

Please send Harmony Line Data Book.

Dr. .....

Address .....

City .....

See page 247 D.D.6

ASTRA PHARMACEUTICAL PRODUCTS, INC.
WORCESTER 6, MASS.

Please send information on Xylocaine HCL.

Dr. .....

Address .....

City .....

See page 248 D.D.6

CAVITRON EQUIPMENT CORP.
42-26 28TH ST.
LONG ISLAND CITY 1, N. Y.

Please send details about Portable Prophylaxis Unit.

Dr. .....

Address .....

City .....

See page 249 D.D.6

AUSTENAL, INC.
5101 KEELER AVE., CHICAGO 32, ILL.

Please send name of nearest Vitallium laboratory.

Dr. .....

Address .....

City .....

See page 250 D.D.6

PETER, STRONG AND CO., INC.
207 E. 37TH ST., NEW YORK 16, N. Y.

Please send further information about Laclede.

Dr. .....

Address .....

City .....

See page 250 D.D.6

PETER, STRONG AND CO., INC.
207 E. 37TH ST., NEW YORK 16, N. Y.

Please send further information about the Benzodent Treatment.

Dr. .....

Address .....

City .....

INTERSTATE
DENTAL CO., INC.

PRESENTS

a NEW

FREE INTRODUCTORY OFFER

SPECIAL 3 UNITS OPOTOW PASTE
plus* 6 ENVELOPES JELSET *free

OPOTOW
Impression Paste
STANDARD

OPOTOW
Paste
FOR
LOWER IMPRESSIONS

NEW FORMULA
OPOTOW
Jelset
Impression Powder
6 ENVELOPES
with 50cc water-measuring vial

3 Units Impression Paste . . . $13.50

FREE—6 ENVELOPES JELSET
and 50cc water-measuring vial
Reg. $2.25

Regular Value	**$15.75**
Special	**$12.75**
YOU SAVE	**$3.00**

SOLE DISTRIBUTORS: INTERSTATE DENTAL CO., INC., NEW YORK

You may order 3 Units of either of the OPOTOW IMPRESSION PASTES featured in this Special Offer, or any combinations of the STANDARD and LOWER IMPRESSION PASTES.

For a limited time ONLY

Interstate Dental Co., Inc., 220 W. 42nd St., New York 36, N.Y.

See page 277 D.D.6

LEDERLE LABORATORIES
PEARL RIVER, N. Y.

Please send free prescription pads.

Dr. .....

Address .....

City .....

See page 278 D.D.6

THE S. S. WHITE DENTAL MFG. CO.
PHILADELPHIA 5, PA.

Please send information about Compressor No. 3.

Dr. .....

Address .....

City .....

See page 279 D.D.6

MYERSON TOOTH CORPORATION
CAMBRIDGE 39, MASS.

Please send information on Comparison Test.

Dr. .....

Address .....

City .....

See page 280 D.D.6

ASTRA PHARMACEUTICAL PRODUCTS, INC.
WORCESTER 6, MASS.

Please send information on Xylocaine Viscous.

Dr. .....

Address .....

City .....